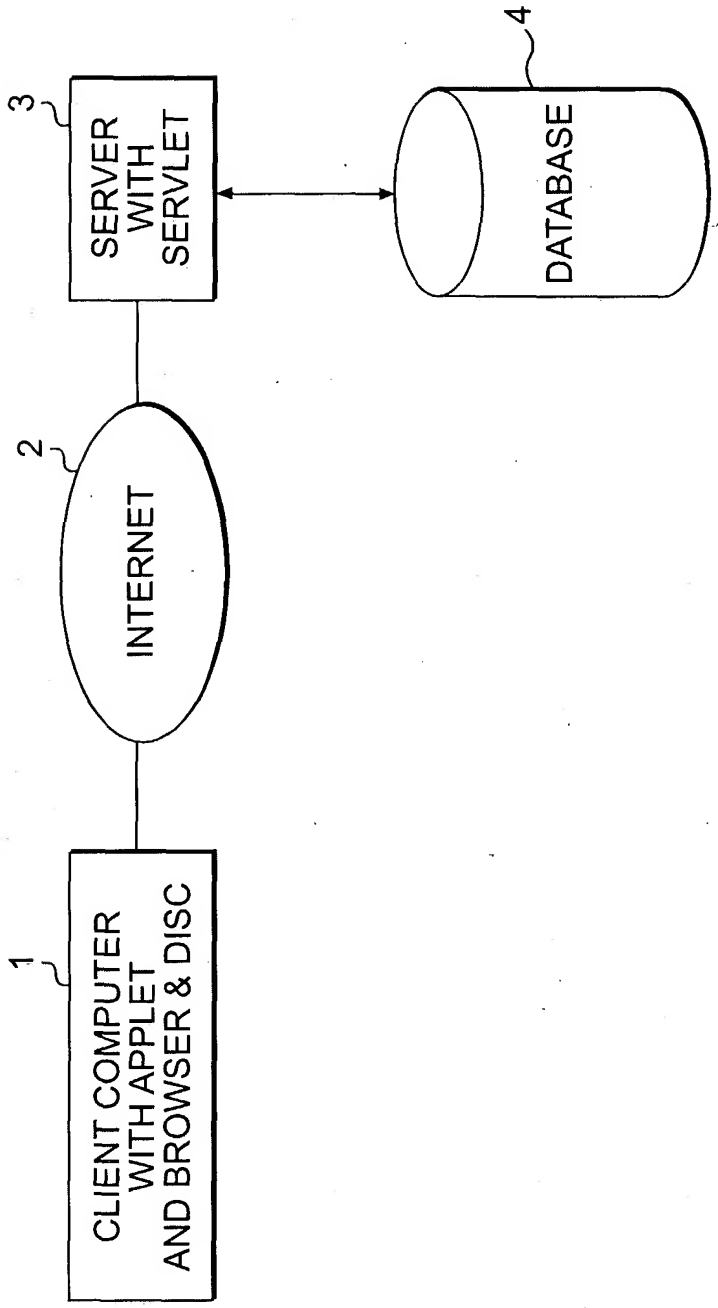

1
CLIENT COMPUTER WITH APPLET AND BROWSER & DISC
2
INTERNET
3
SERVER WITH SERVLET
4
DATABASE

FIG. 1

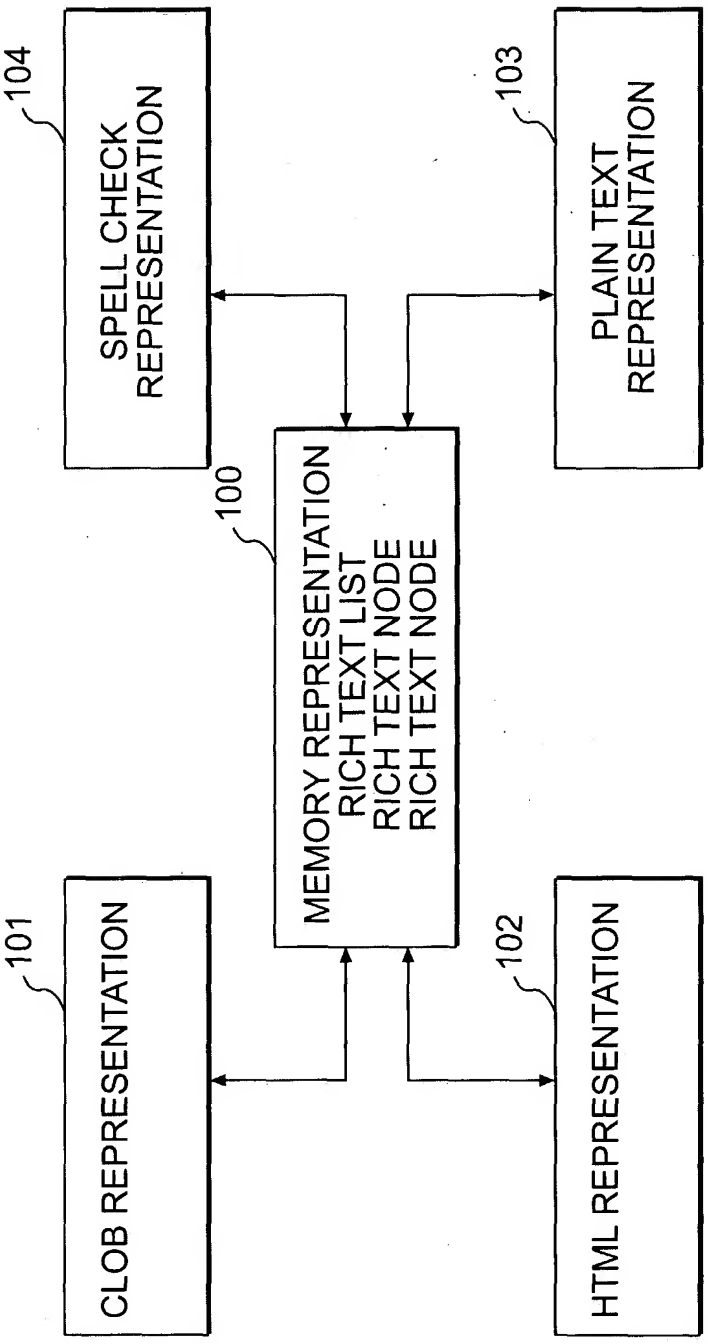

104
SPELL CHECK REPRESENTATION
103
PLAIN TEXT REPRESENTATION
100
MEMORY REPRESENTATION
RICH TEXT LIST
RICH TEXT NODE
RICH TEXT NODE
101
CLOB REPRESENTATION
102
HTML REPRESENTATION

FIG. 2A

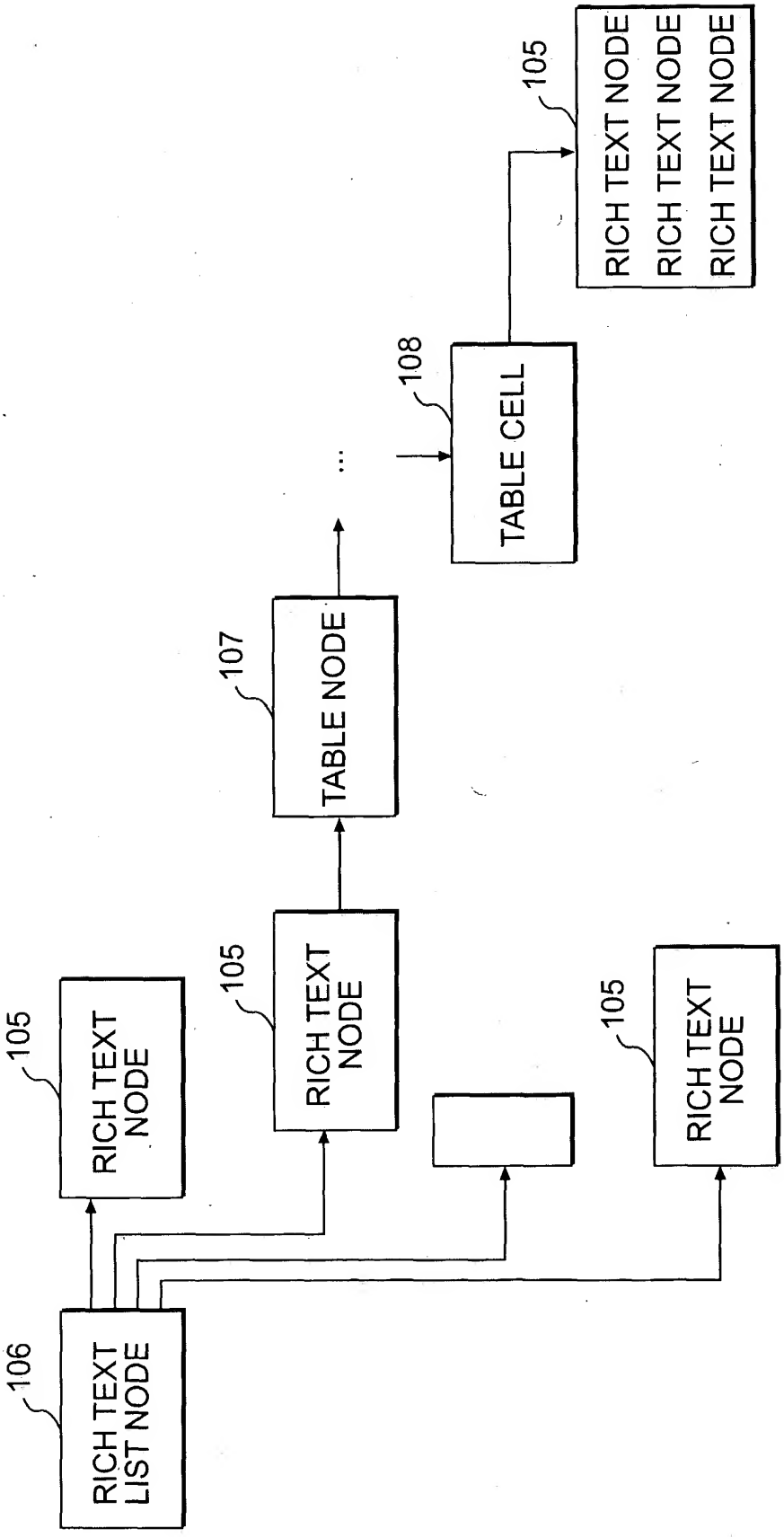

RICH TEXT LIST NODE
106
RICH TEXT NODE
105
RICH TEXT NODE
105
RICH TEXT NODE
105
TABLE NODE
107
...
TABLE CELL
108
RICH TEXT NODE
RICH TEXT NODE
RICH TEXT NODE
105

FIG. 2B

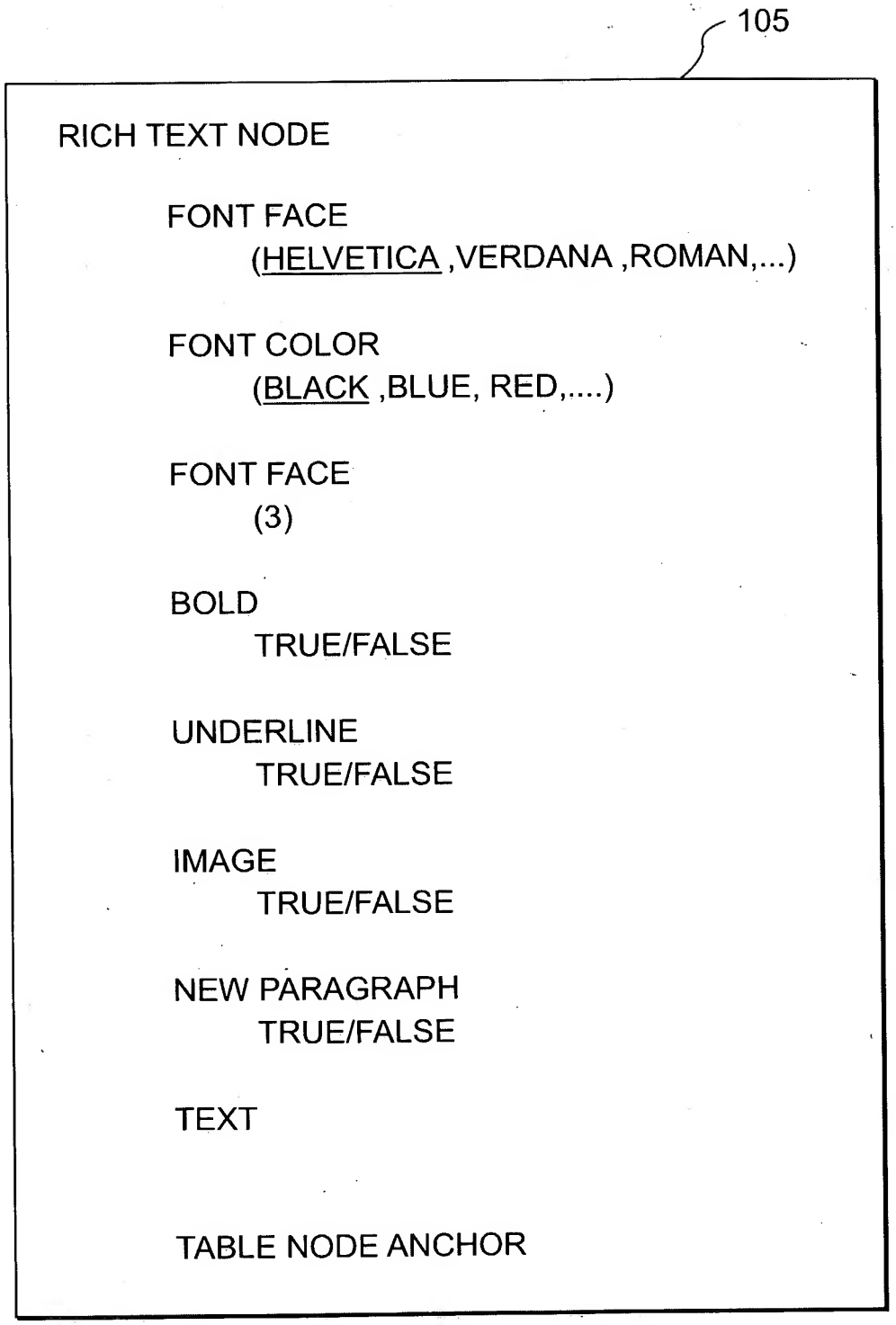

105
RICH TEXT NODE
FONT FACE
(HELVETICA ,VERDANA ,ROMAN,...)
FONT COLOR
(BLACK ,BLUE, RED,....)
FONT FACE
(3)
BOLD
TRUE/FALSE
UNDERLINE
TRUE/FALSE
IMAGE
TRUE/FALSE
NEW PARAGRAPH
TRUE/FALSE
TEXT
TABLE NODE ANCHOR

FIG. 2C

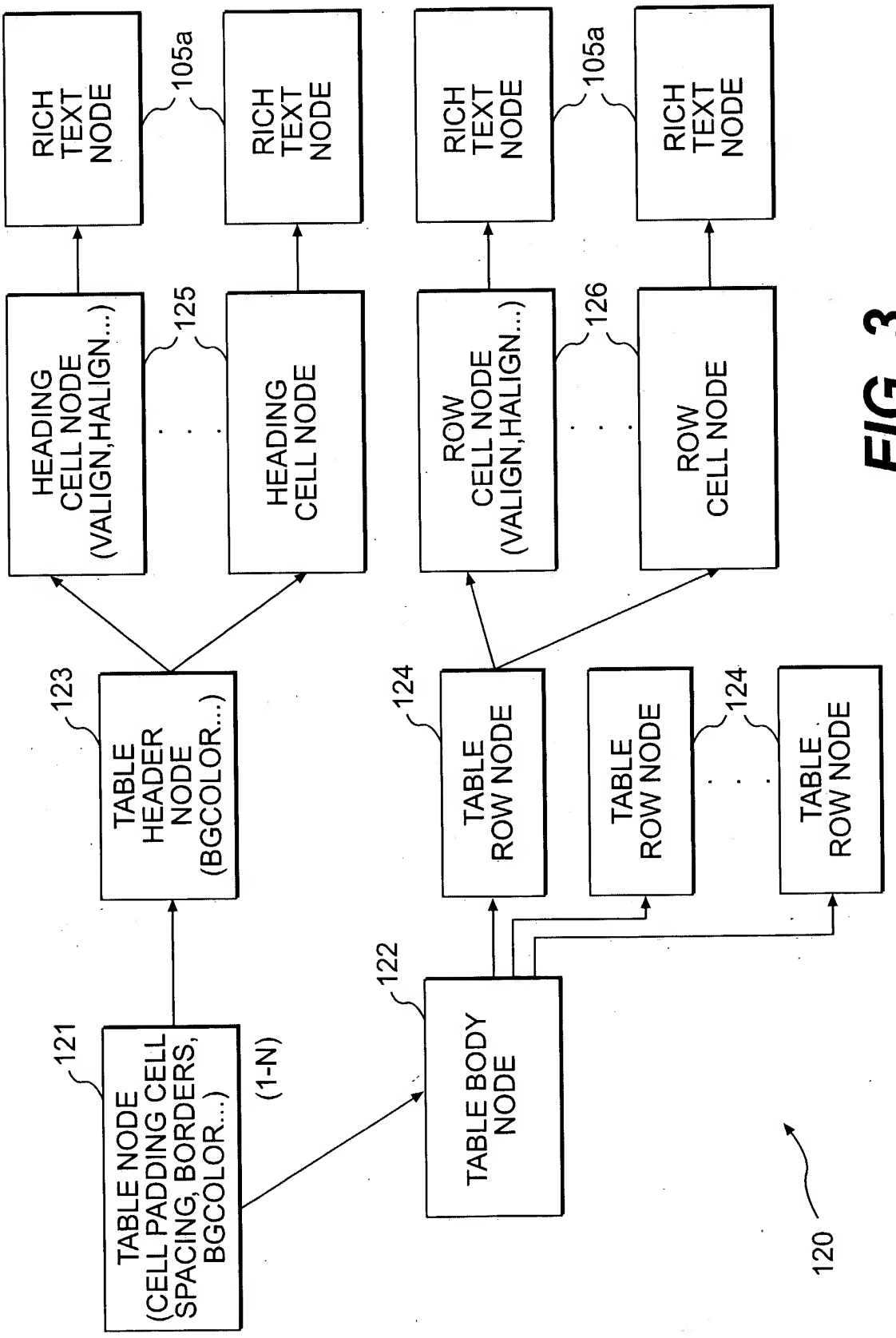


TABLE NODE (CELL PADDING CELL SPACING, BORDERS, BGCOLOR...)
121
(1-N)
TABLE HEADER NODE (BGCOLOR...)
123
HEADING CELL NODE (VALIGN,HALIGN...)
125
HEADING CELL NODE
RICH TEXT NODE
105a
RICH TEXT NODE
TABLE BODY NODE
122
TABLE ROW NODE
124
ROW CELL NODE (VALIGN,HALIGN...)
126
ROW CELL NODE
RICH TEXT NODE
105a
RICH TEXT NODE
TABLE ROW NODE
124
TABLE ROW NODE
120

FIG. 3

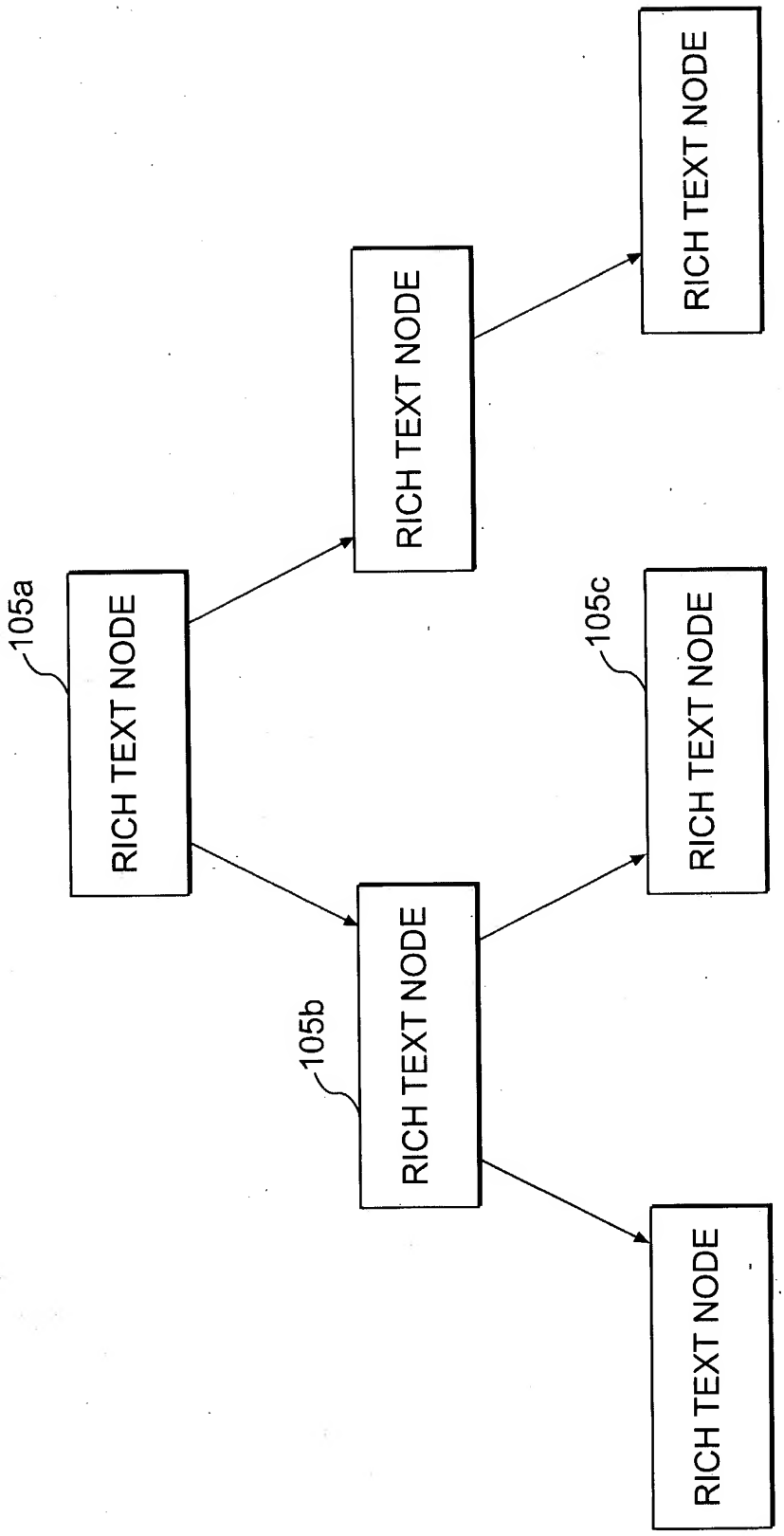

105a
RICH TEXT NODE
RICH TEXT NODE
RICH TEXT NODE
105b
RICH TEXT NODE
105c
RICH TEXT NODE
RICH TEXT NODE

FIG. 4

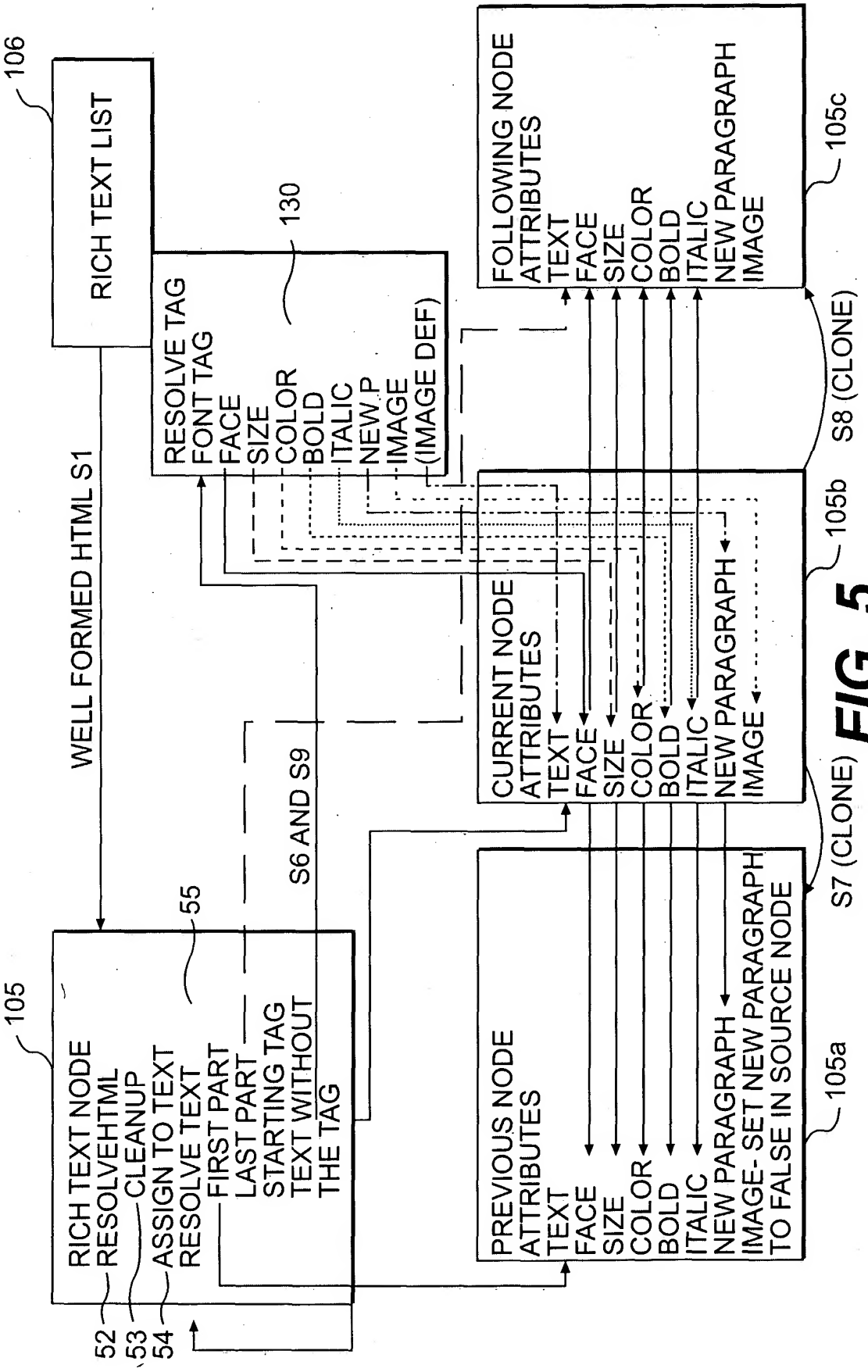

106
RICH TEXT LIST
WELL FORMED HTML S1
130
RESOLVE TAG
FONT TAG
FACE
SIZE
COLOR
BOLD
ITALIC
NEW P
IMAGE
(IMAGE DEF)
FOLLOWING NODE
ATTRIBUTES
TEXT
FACE
SIZE
COLOR
BOLD
ITALIC
NEW PARAGRAPH
IMAGE
105c
S8 (CLONE)
105b
CURRENT NODE
ATTRIBUTES
TEXT
FACE
SIZE
COLOR
BOLD
ITALIC
NEW PARAGRAPH
IMAGE
S7 (CLONE)
105
RICH TEXT NODE
RESOLVEHTML
CLEANUP
ASSIGN TO TEXT
RESOLVE TEXT
FIRST PART
LAST PART
STARTING TAG
TEXT WITHOUT
THE TAG
55
S6 AND S9
PREVIOUS NODE
ATTRIBUTES
TEXT
FACE
SIZE
COLOR
BOLD
ITALIC
NEW PARAGRAPH
IMAGE- SET NEW PARAGRAPH
TO FALSE IN SOURCE NODE
105a
52
53
54

FIG. 5

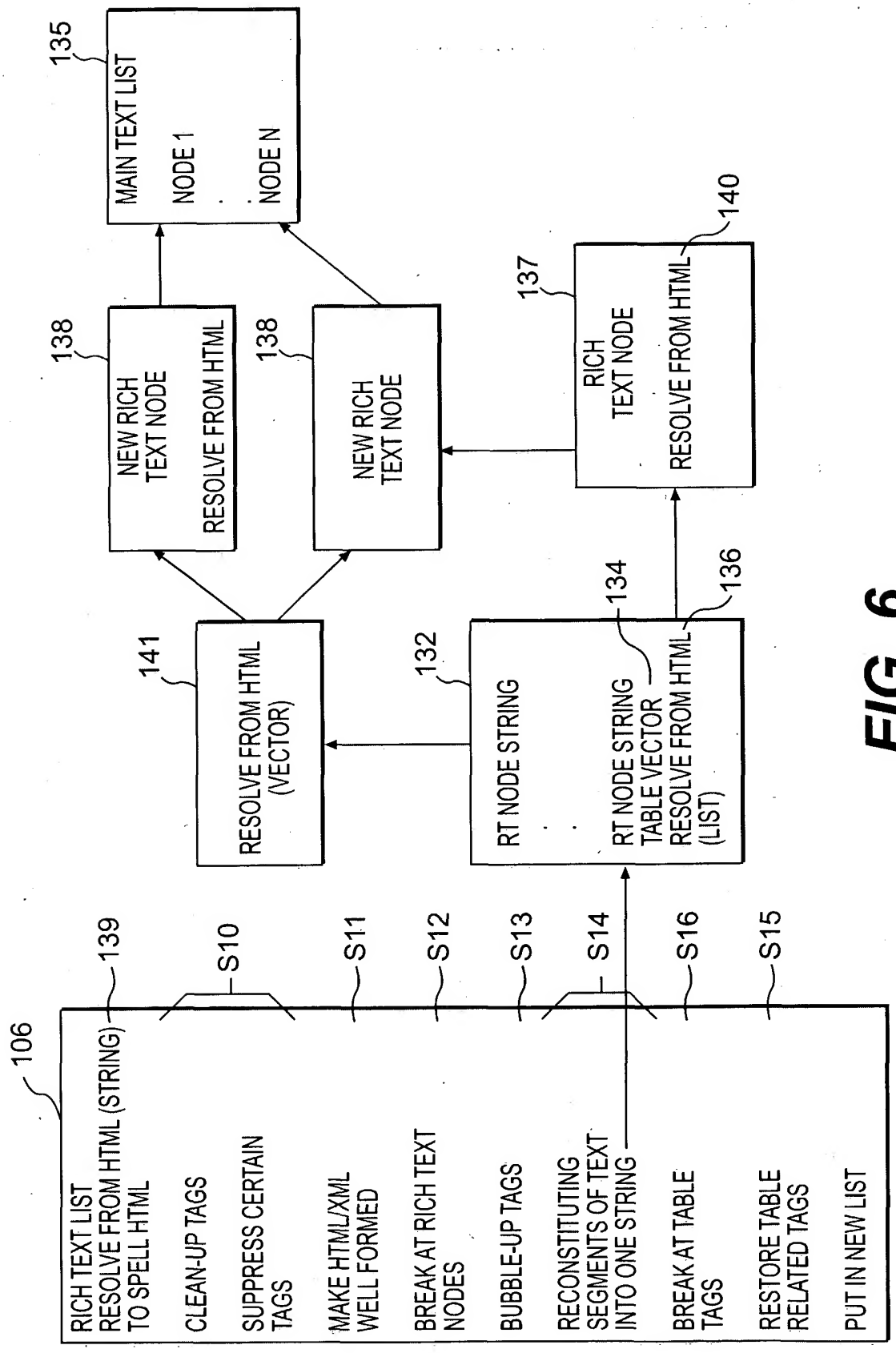

106
RICH TEXT LIST
RESOLVE FROM HTML (STRING)
TO SPELL HTML
139
CLEAN-UP TAGS
S10
SUPPRESS CERTAIN
TAGS
S11
MAKE HTML/XML
WELL FORMED
S12
BREAK AT RICH TEXT
NODES
S13
BUBBLE-UP TAGS
S14
RECONSTITUTING
SEGMENTS OF TEXT
INTO ONE STRING
S16
BREAK AT TABLE
TAGS
S15
RESTORE TABLE
RELATED TAGS
PUT IN NEW LIST
141
RESOLVE FROM HTML
(VECTOR)
132
RT NODE STRING
134
RT NODE STRING
TABLE VECTOR
136
RESOLVE FROM HTML
(LIST)
138
NEW RICH
TEXT NODE
RESOLVE FROM HTML
138
NEW RICH
TEXT NODE
137
RICH
TEXT NODE
RESOLVE FROM HTML
140
135
MAIN TEXT LIST
NODE 1
NODE N

FIG. 6

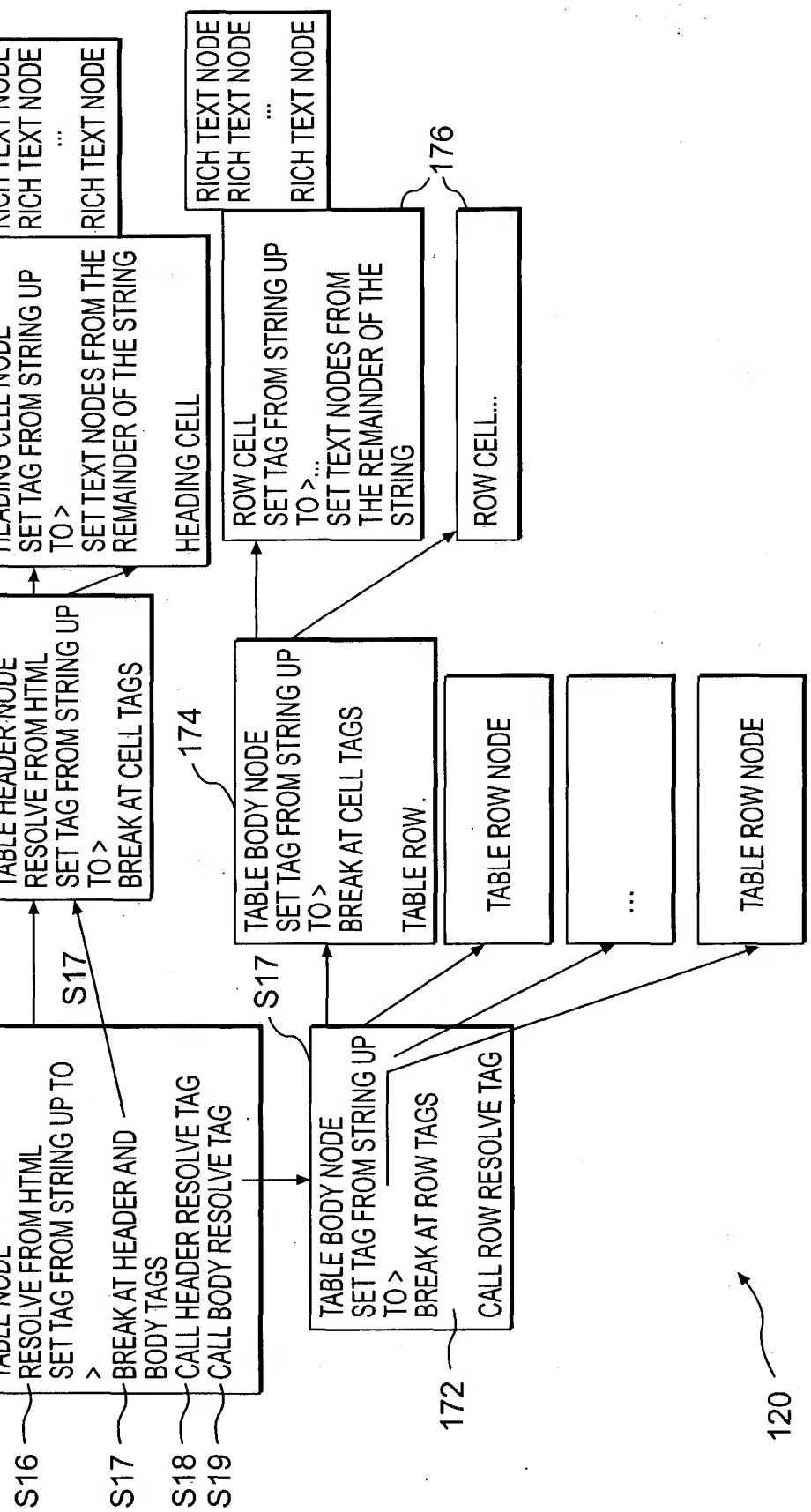


TABLE NODE
RESOLVE FROM HTML
SET TAG FROM STRING UP TO
>
BREAK AT HEADER AND
BODY TAGS
CALL HEADER RESOLVE TAG
CALL BODY RESOLVE TAG
171
S16
S17
S18
S19
TABLE HEADER NODE
RESOLVE FROM HTML
SET TAG FROM STRING UP
TO >
BREAK AT CELL TAGS
173
HEADING CELL NODE
SET TAG FROM STRING UP
TO >
SET TEXT NODES FROM THE
REMAINDER OF THE STRING
HEADING CELL
175
RICH TEXT NODE
RICH TEXT NODE
...
RICH TEXT NODE
TABLE BODY NODE
SET TAG FROM STRING UP
TO >
BREAK AT ROW TAGS
CALL ROW RESOLVE TAG
172
S17
TABLE BODY NODE
SET TAG FROM STRING UP
TO >
BREAK AT CELL TAGS
TABLE ROW
174
ROW CELL
SET TAG FROM STRING UP
TO >...
SET TEXT NODES FROM
THE REMAINDER OF THE
STRING
176
RICH TEXT NODE
RICH TEXT NODE
...
RICH TEXT NODE
ROW CELL...
TABLE ROW NODE
...
TABLE ROW NODE
120

FIG. 7

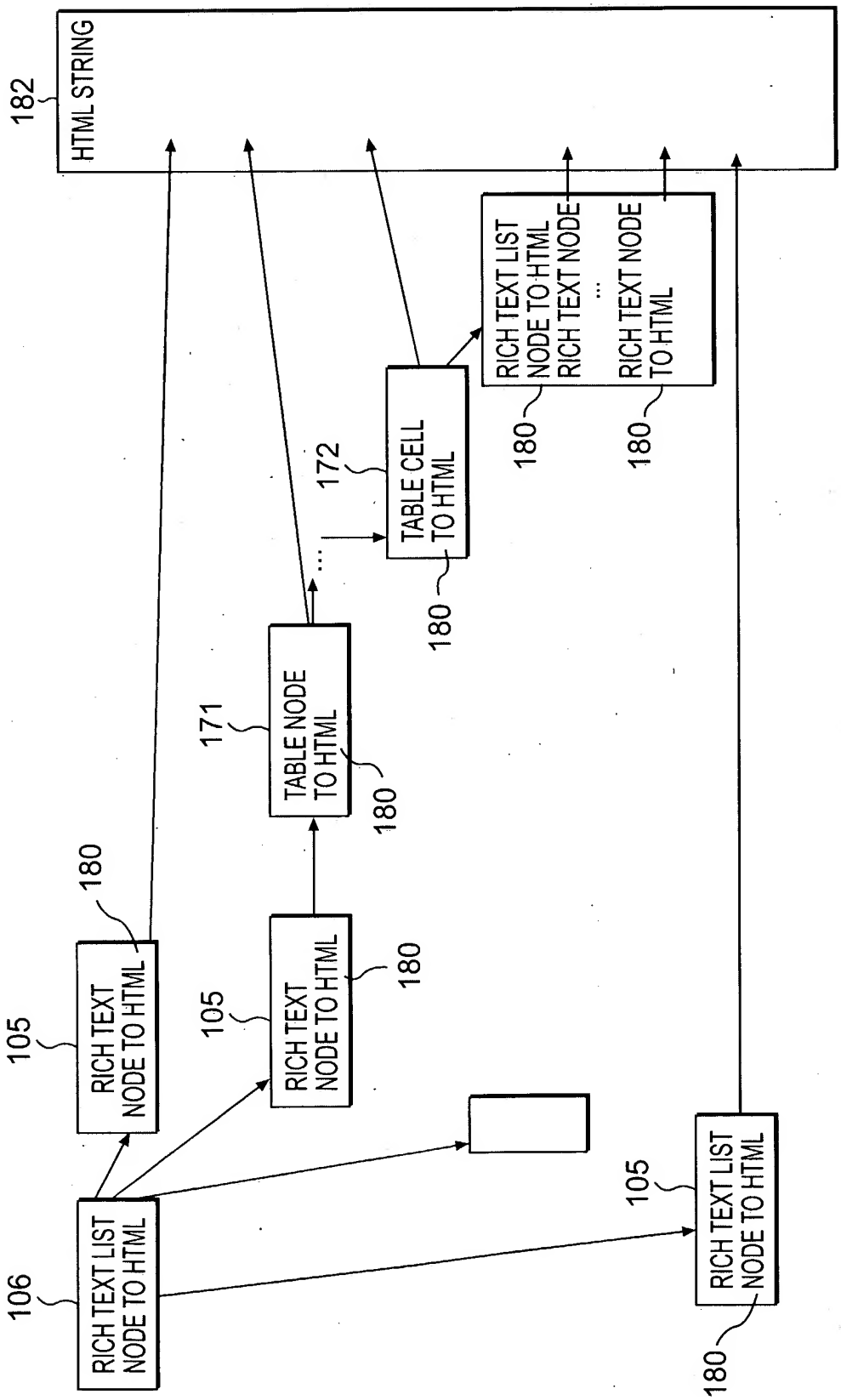

182
HTML STRING
RICH TEXT LIST NODE TO HTML
106
RICH TEXT NODE TO HTML
105
180
RICH TEXT NODE TO HTML
105
180
TABLE NODE TO HTML
171
180
TABLE CELL TO HTML
172
180
RICH TEXT LIST NODE TO HTML
RICH TEXT NODE
...
RICH TEXT NODE TO HTML
180
180
RICH TEXT LIST NODE TO HTML
105
180

FIG. 8

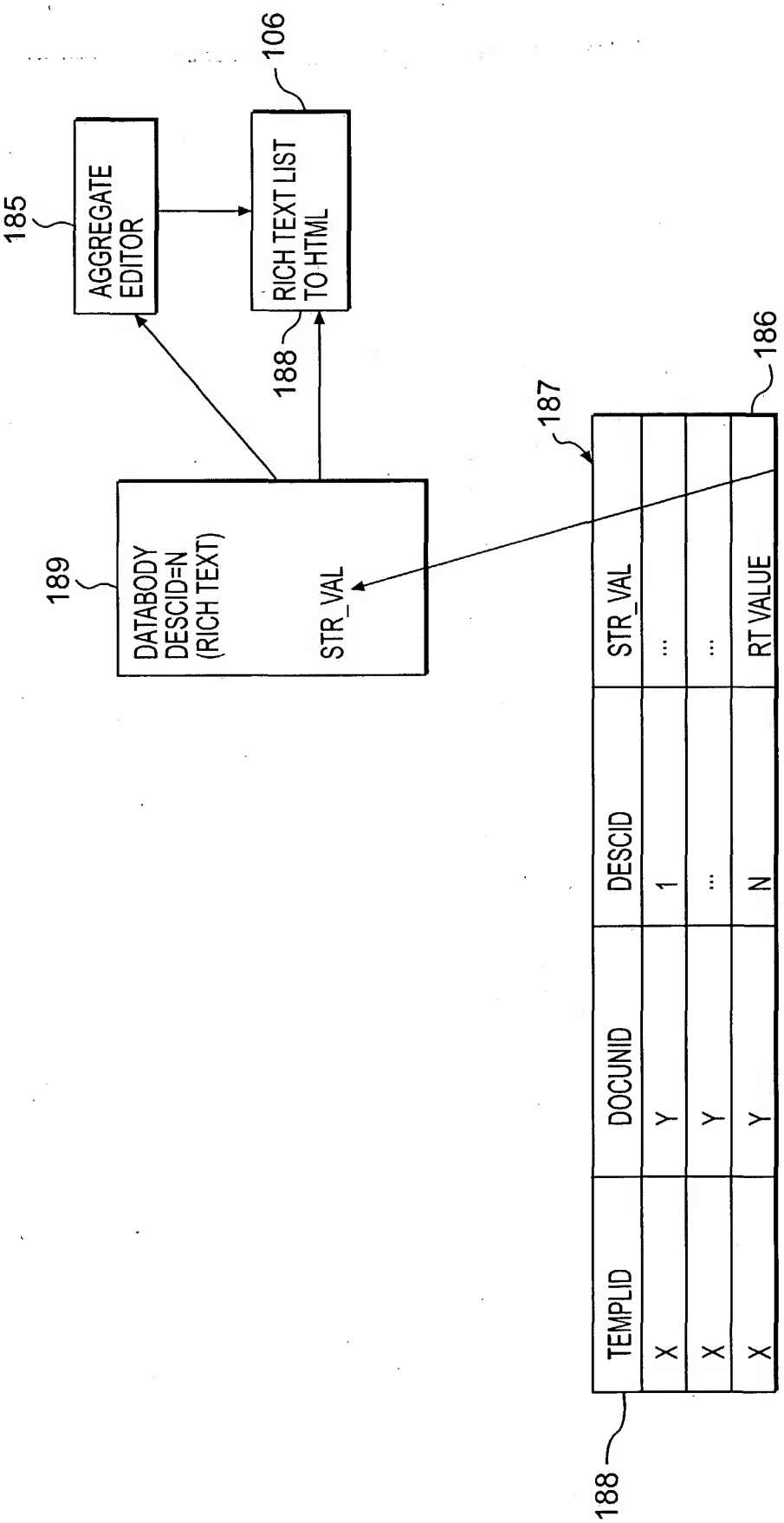

106
185
AGGREGATE EDITOR
RICH TEXT LIST TO HTML
188
187
186
189
DATABODY DESCID=N (RICH TEXT)
STR_VAL
TEMPLID
DOCUNID
DESCID
STR_VAL
X
Y
1
...
X
Y
...
...
X
Y
N
RT VALUE
188

FIG. 9

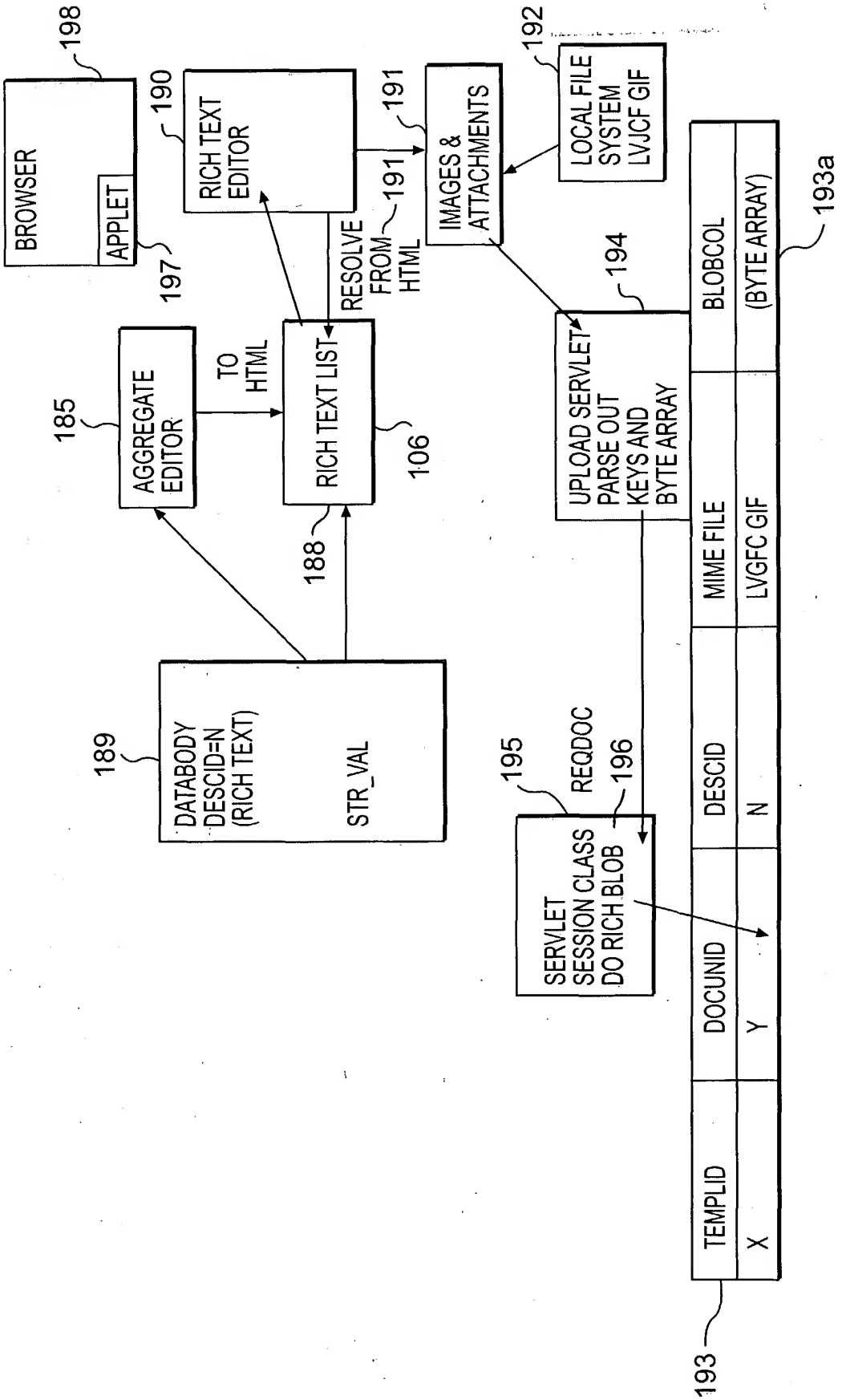

198
BROWSER
APPLET
197
190
RICH TEXT EDITOR
191
191
RESOLVE FROM HTML
192
IMAGES & ATTACHMENTS
LOCAL FILE SYSTEM LVJCF GIF
185
AGGREGATE EDITOR
TO HTML
RICH TEXT LIST
106
188
194
UPLOAD SERVLET PARSE OUT KEYS AND BYTE ARRAY
BLOBCOL
MIME FILE
LVGFC GIF
(BYTE ARRAY)
193a
189
DATABODY DESCID=N (RICH TEXT)
STR_VAL
195
REQDOC
196
SERVLET SESSION CLASS DO RICH BLOB
TEMPLID
DOCUNID
DESCID
X
Y
N
193

FIG. 10

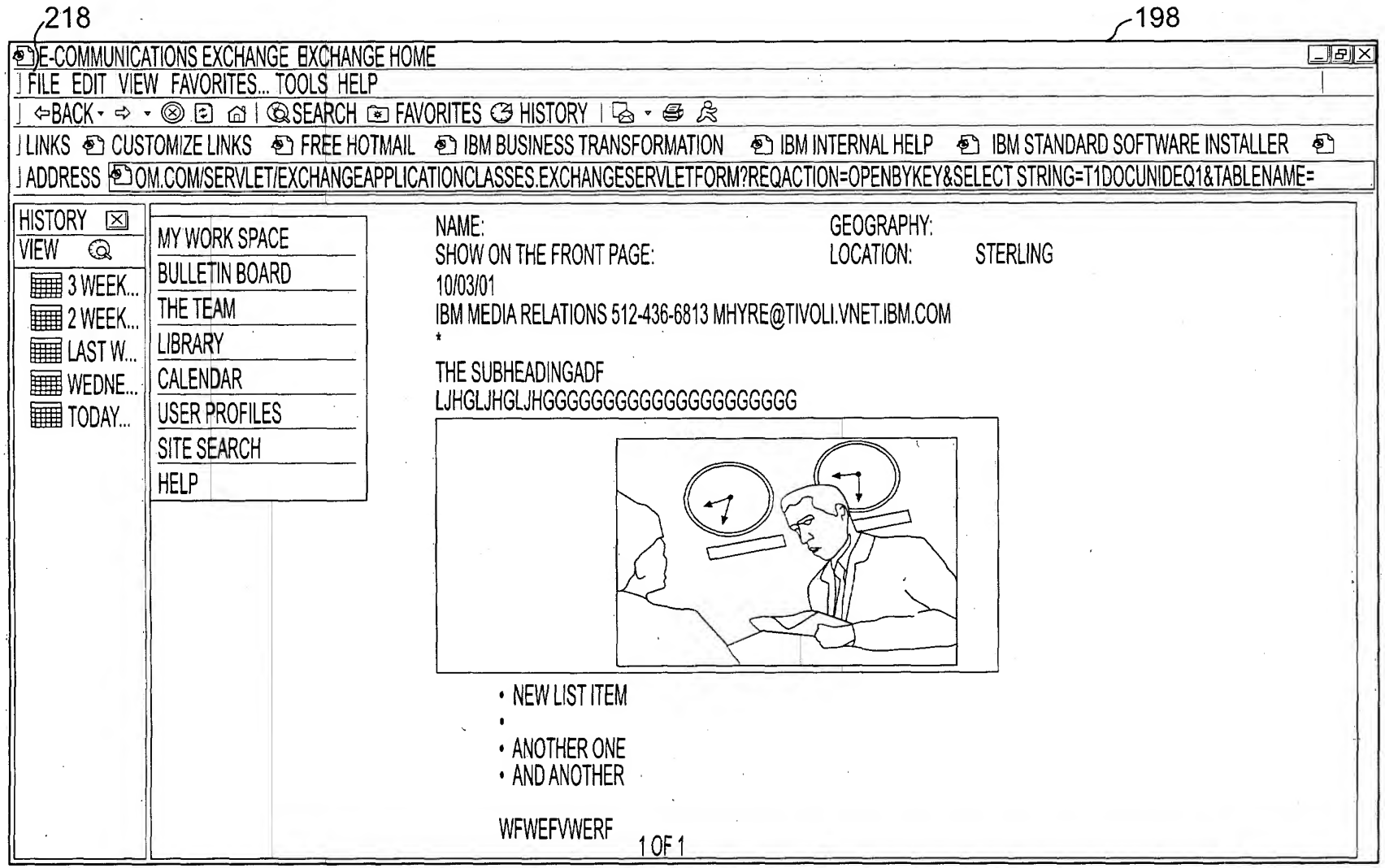

218
198
E-COMMUNICATIONS EXCHANGE EXCHANGE HOME
FILE EDIT VIEW FAVORITES... TOOLS HELP
BACK SEARCH FAVORITES HISTORY
LINKS CUSTOMIZE LINKS FREE HOTMAIL IBM BUSINESS TRANSFORMATION IBM INTERNAL HELP IBM STANDARD SOFTWARE INSTALLER
ADDRESS OM.COM/SERVLET/EXCHANGEAPPLICATIONCLASSES.EXCHANGESERVLETFORM?REQACTION=OPENBYKEY&SELECT STRING=T1DOCUNIDEQ1&TABLENAME=
HISTORY
VIEW
3 WEEK...
2 WEEK...
LAST W...
WEDNE...
TODAY...
MY WORK SPACE
BULLETIN BOARD
THE TEAM
LIBRARY
CALENDAR
USER PROFILES
SITE SEARCH
HELP
NAME:
GEOGRAPHY:
SHOW ON THE FRONT PAGE:
LOCATION: STERLING
10/03/01
IBM MEDIA RELATIONS 512-436-6813 MHYRE@TIVOLI.VNET.IBM.COM
*
THE SUBHEADINGADF
LJHGLJHGLJHGGGGGGGGGGGGGGGGGGG
• NEW LIST ITEM
•
• ANOTHER ONE
• AND ANOTHER
WFWEFVWERF
1 OF 1

FIG. 11A

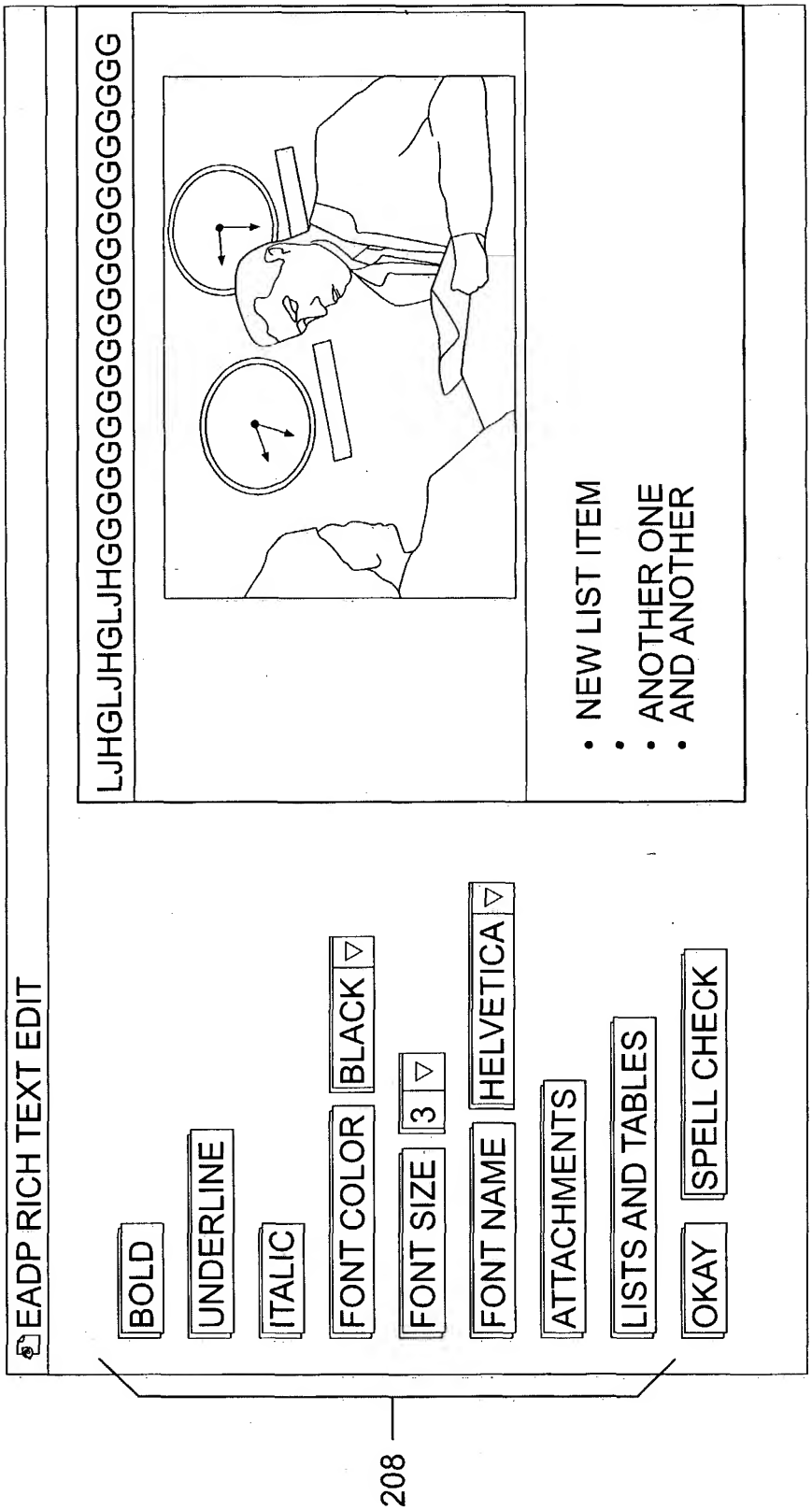

EADP RICH TEXT EDIT
BOLD
UNDERLINE
ITALIC
FONT COLOR
BLACK
FONT SIZE
3
FONT NAME
HELVETICA
ATTACHMENTS
LISTS AND TABLES
OKAY
SPELL CHECK
208
LJHGLJHGLJHGGGGGGGGGGGGGGGGGGG
• NEW LIST ITEM
• ANOTHER ONE
• AND ANOTHER

FIG. 11B

*LANGUAGE:

ENGLISH

*TITLE/SUBJECT:

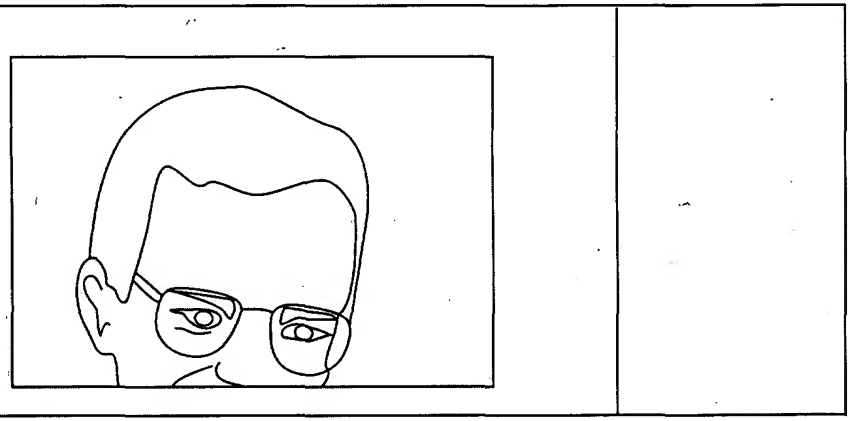
*BODY TEXT

POST A SYNOPSIS OR FULL TEXT, ATTACH ANY ASSOCIATED FILES, AND/OR INCLUDE ANY APPROPRIATE URLS, TO COPY AND PASTE FROM WORDPRO, YOU MUST SAVE AS HTML, AND REOPEN IN INTERNET EXPLORER.

208 208

SIZE FONT TEXT FORMAT

JJGHGJGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG



SELECT AN ACTION AND CLICK SAVE.

ACTIONS:

SAVE AS DRAFT

FIG. 11C

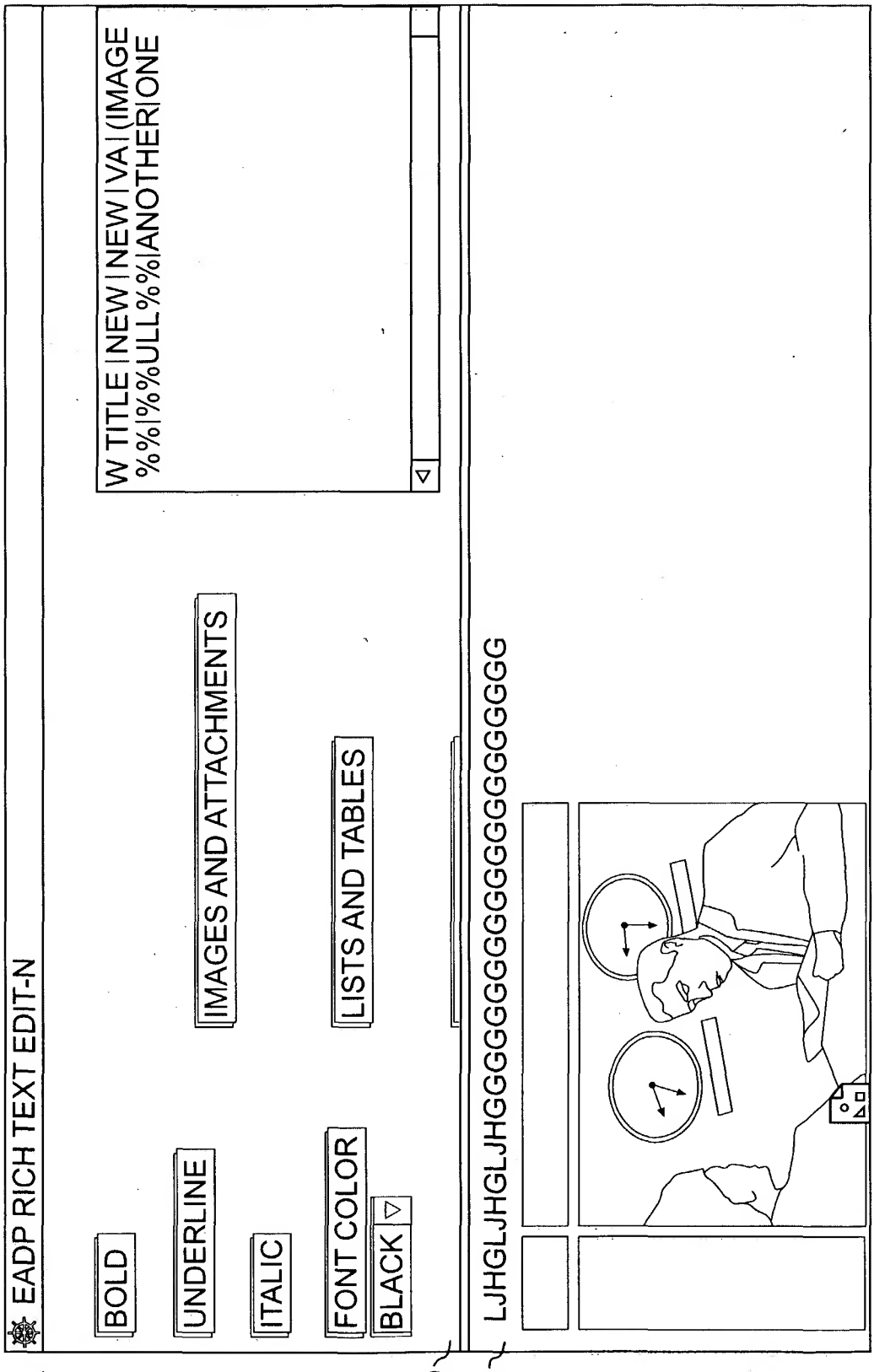

EADP RICH TEXT EDIT-N
BOLD
UNDERLINE
ITALIC
FONT COLOR
BLACK
IMAGES AND ATTACHMENTS
LISTS AND TABLES
W TITLE |NEW |NEW |VA| (IMAGE
%%|%%ULL%%|ANOTHER|ONE
LJHGLJHGLJHGGGGGGGGGGGGGGGGG
210
211

FIG. 11D

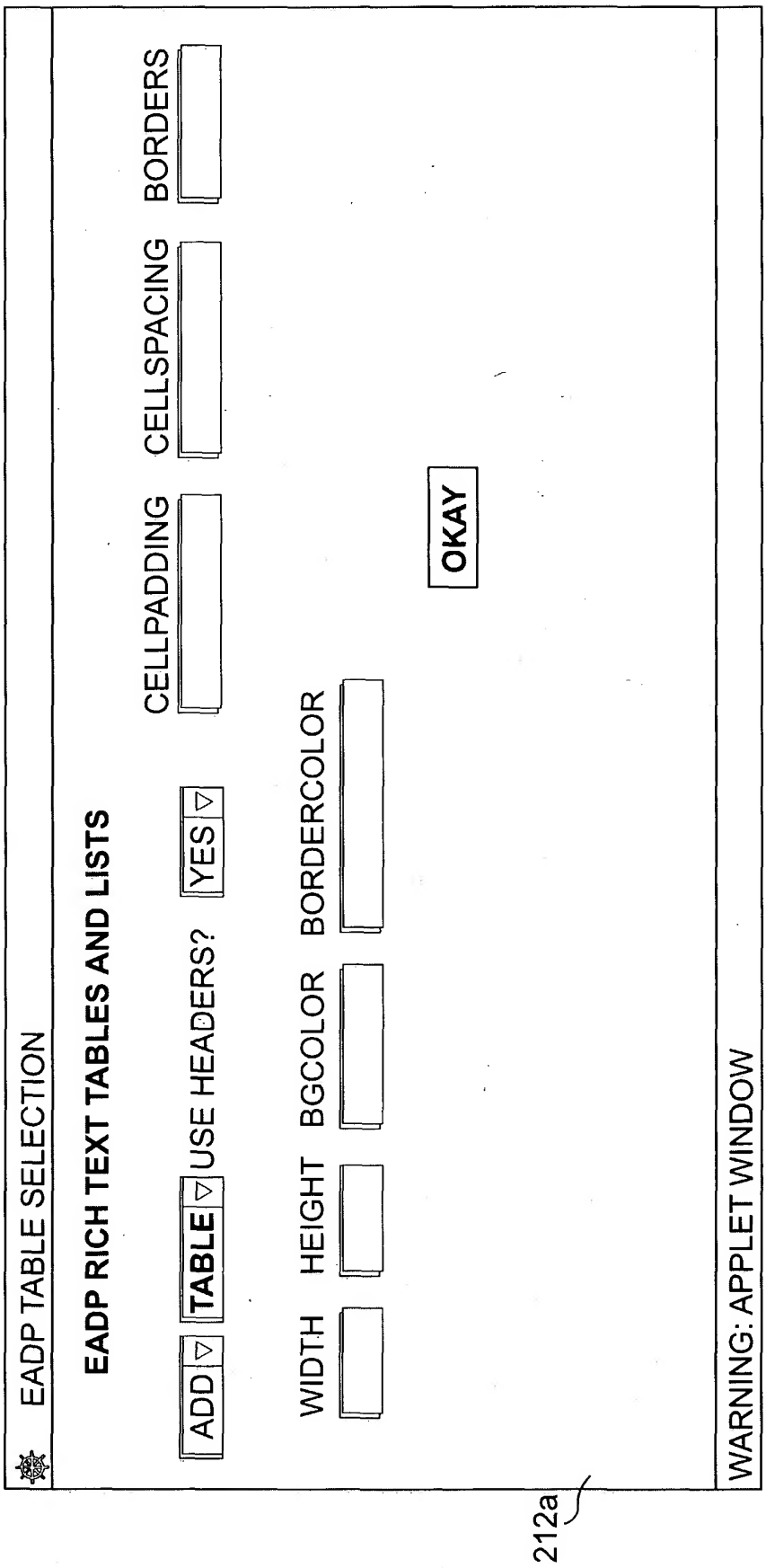

EADP TABLE SELECTION
EADP RICH TEXT TABLES AND LISTS
ADD
TABLE
USE HEADERS?
YES
CELLPADDING
CELLSPACING
BORDERS
WIDTH
HEIGHT
BGCOLOR
BORDERCOLOR
OKAY
WARNING: APPLET WINDOW
212a

FIG. 12A

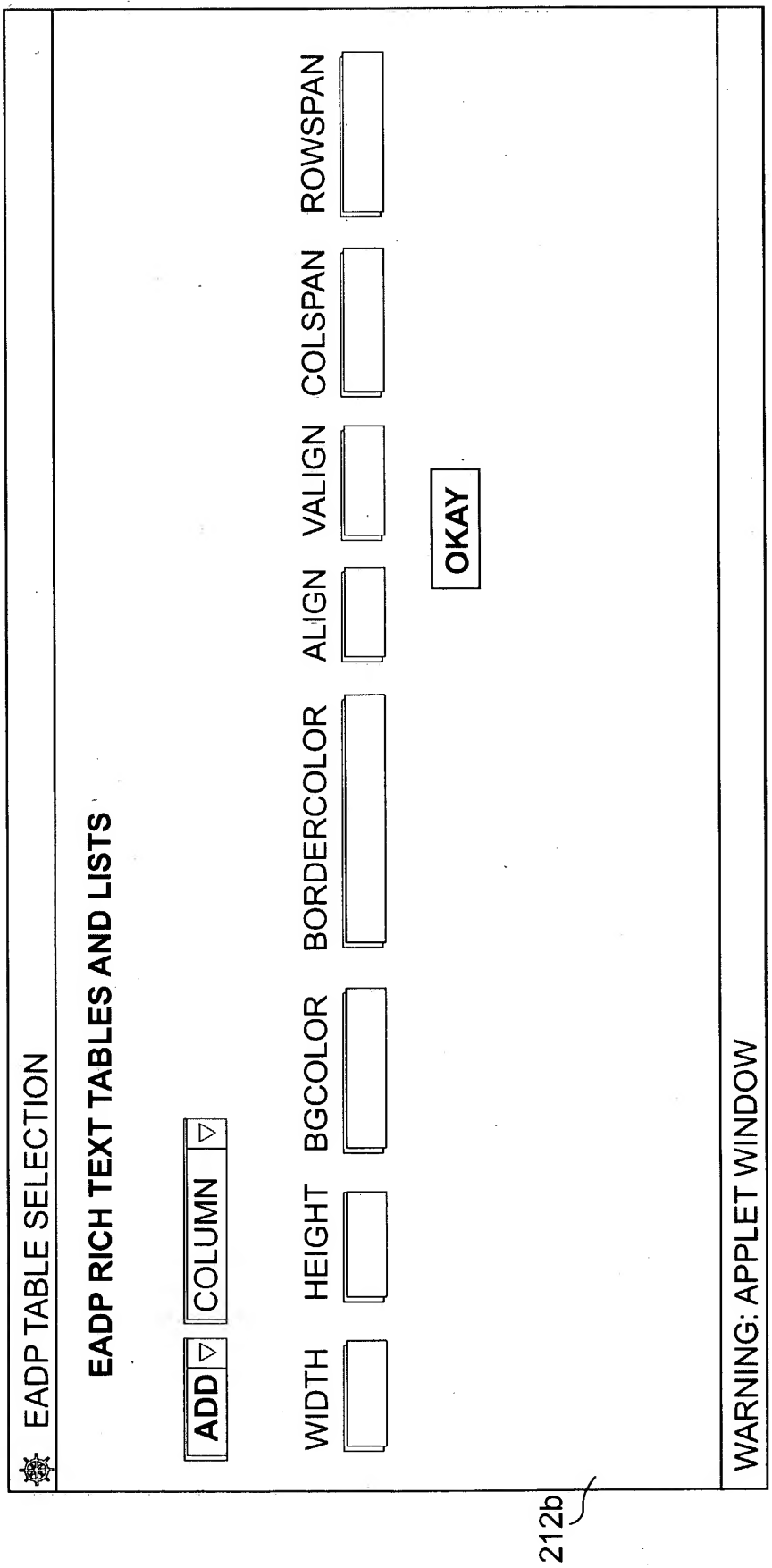

EADP TABLE SELECTION
EADP RICH TEXT TABLES AND LISTS
ADD
COLUMN
WIDTH
HEIGHT
BGCOLOR
BORDERCOLOR
ALIGN
VALIGN
COLSPAN
ROWSPAN
OKAY
WARNING: APPLET WINDOW
212b

FIG. 12B

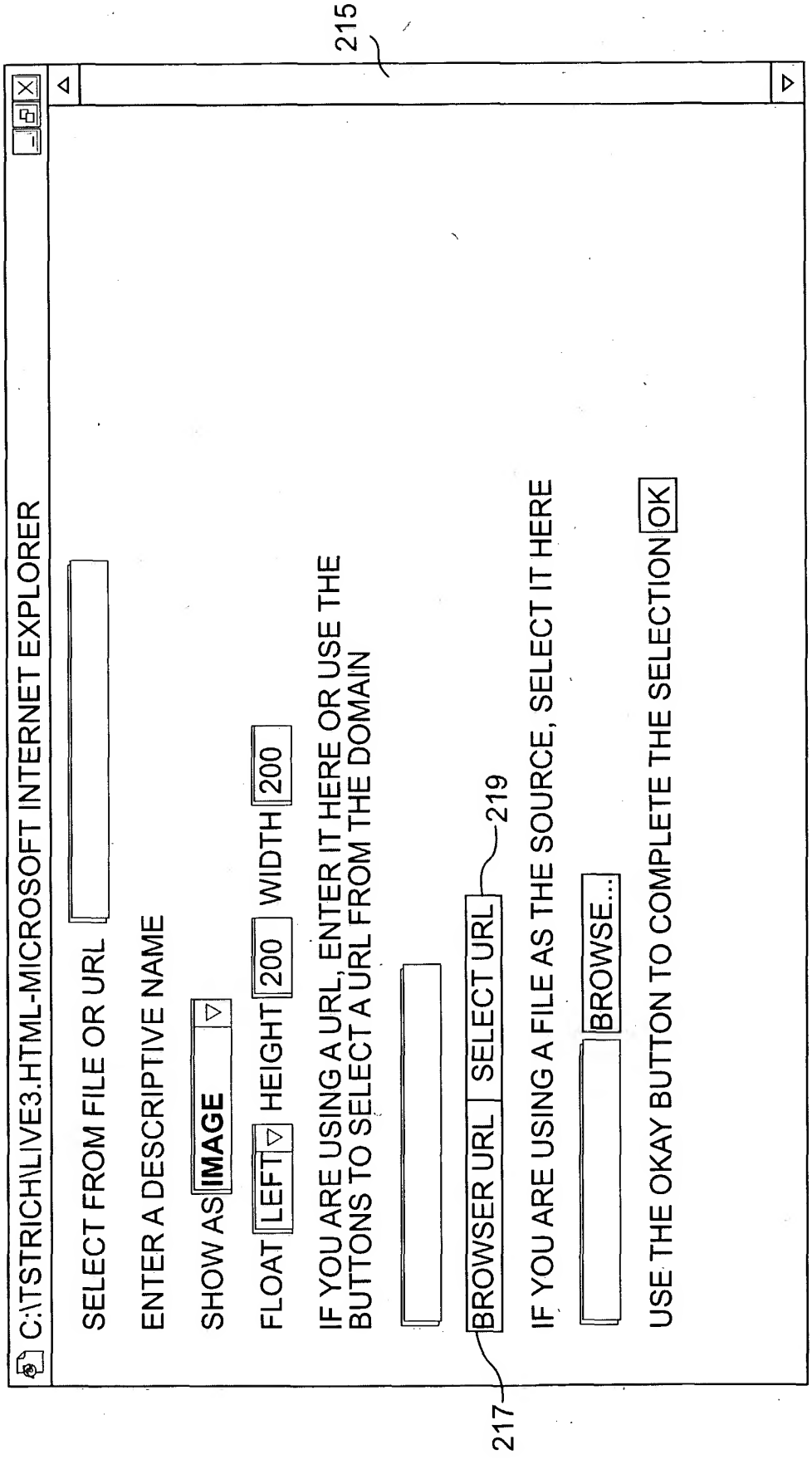

C:\TSTRICH\LIVE3.HTML-MICROSOFT INTERNET EXPLORER
SELECT FROM FILE OR URL
ENTER A DESCRIPTIVE NAME
SHOW AS IMAGE
FLOAT LEFT HEIGHT 200 WIDTH 200
IF YOU ARE USING A URL, ENTER IT HERE OR USE THE BUTTONS TO SELECT A URL FROM THE DOMAIN
BROWSER URL
SELECT URL
IF YOU ARE USING A FILE AS THE SOURCE, SELECT IT HERE
BROWSE...
USE THE OKAY BUTTON TO COMPLETE THE SELECTION
OK
215
217
219

FIG. 13A

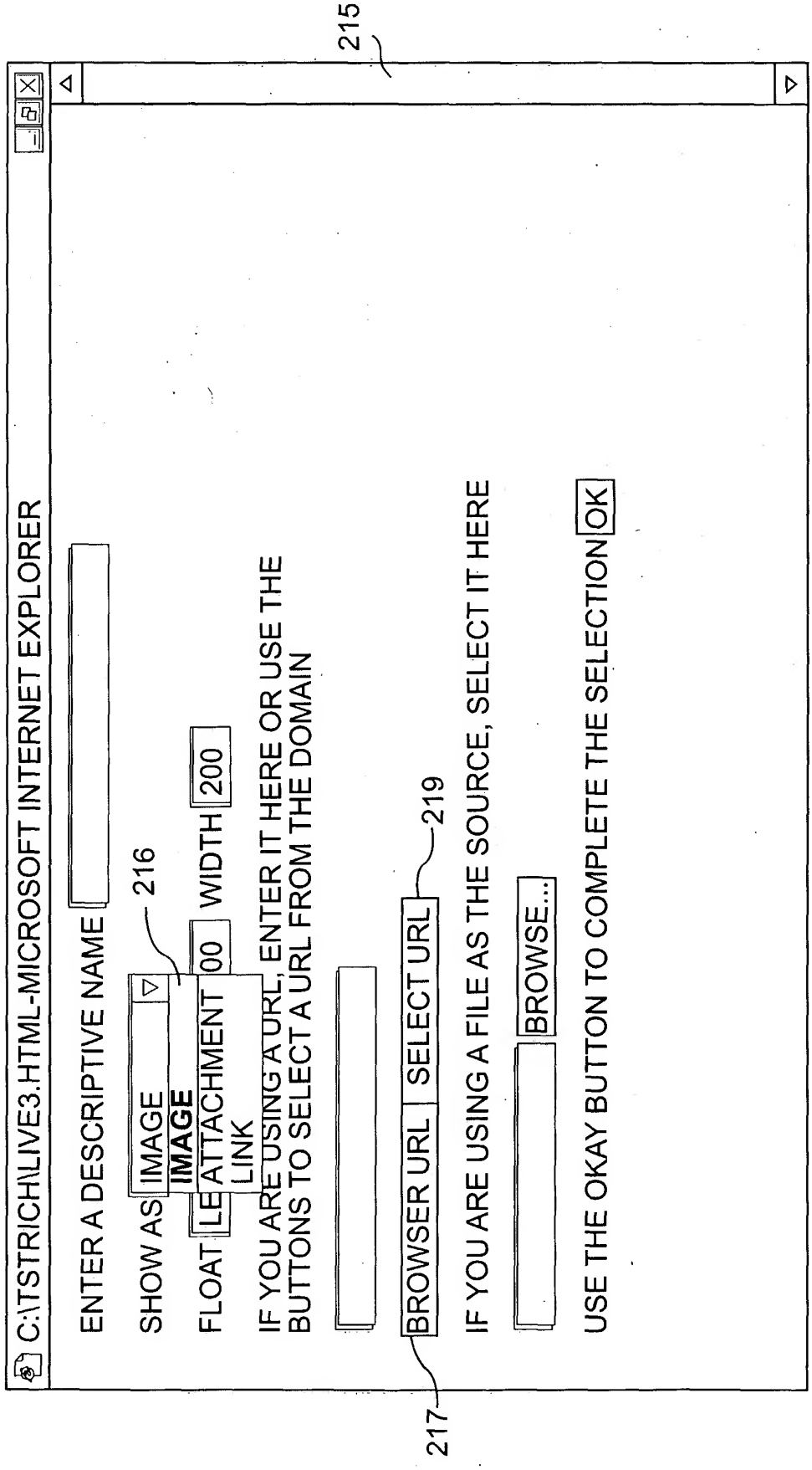

C:\TSTRICH\LIVE3.HTML-MICROSOFT INTERNET EXPLORER
215
ENTER A DESCRIPTIVE NAME
SHOW AS IMAGE
IMAGE
216
FLOAT LE ATTACHMENT
LINK
00
WIDTH 200
IF YOU ARE USING A URL, ENTER IT HERE OR USE THE BUTTONS TO SELECT A URL FROM THE DOMAIN
BROWSER URL
SELECT URL
219
217
IF YOU ARE USING A FILE AS THE SOURCE, SELECT IT HERE
BROWSE...
USE THE OKAY BUTTON TO COMPLETE THE SELECTION
OK

FIG. 13B

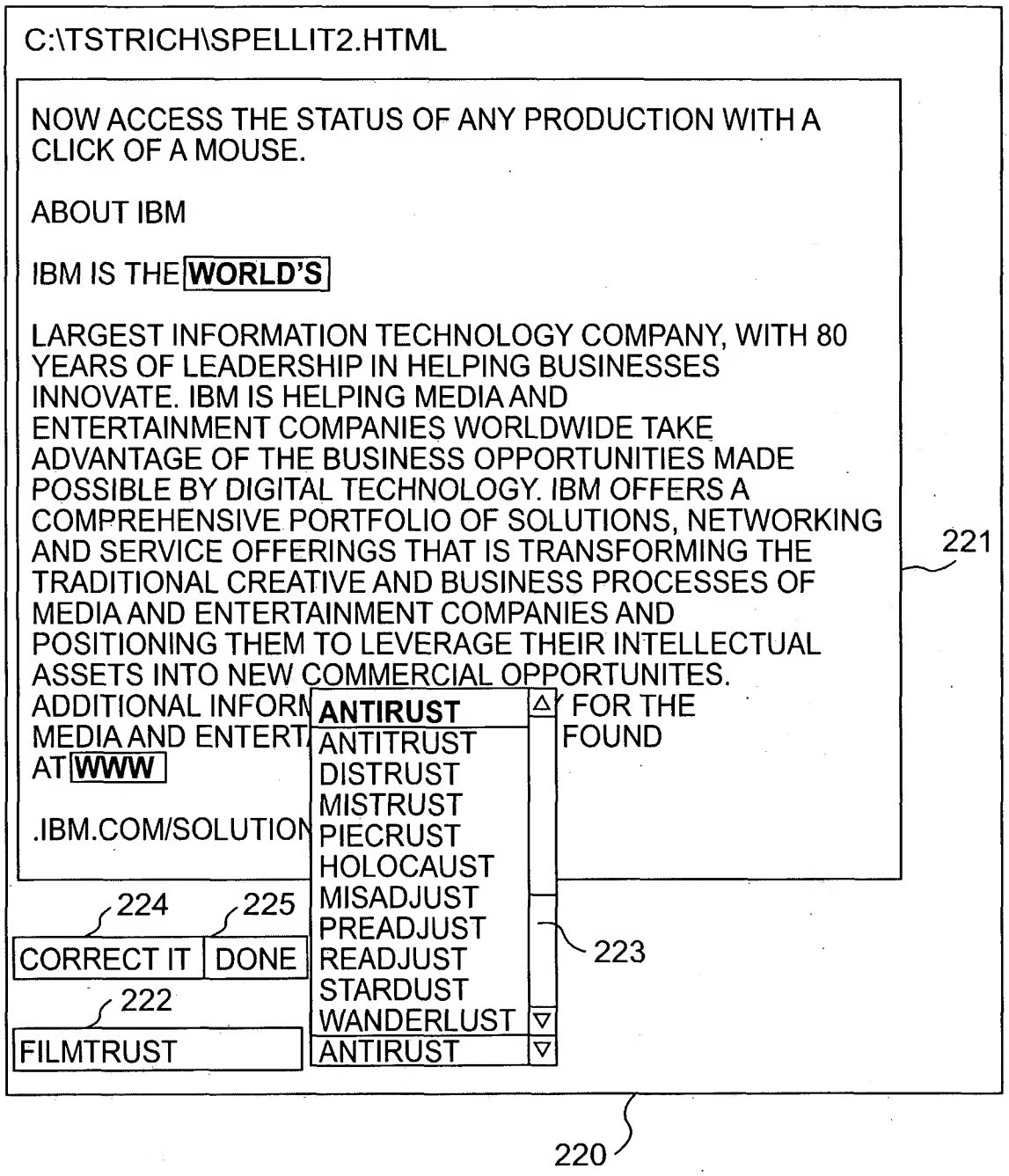

C:\TSTRICH\SPELLIT2.HTML
NOW ACCESS THE STATUS OF ANY PRODUCTION WITH A CLICK OF A MOUSE.
ABOUT IBM
IBM IS THE WORLD'S
LARGEST INFORMATION TECHNOLOGY COMPANY, WITH 80 YEARS OF LEADERSHIP IN HELPING BUSINESSES INNOVATE. IBM IS HELPING MEDIA AND ENTERTAINMENT COMPANIES WORLDWIDE TAKE ADVANTAGE OF THE BUSINESS OPPORTUNITIES MADE POSSIBLE BY DIGITAL TECHNOLOGY. IBM OFFERS A COMPREHENSIVE PORTFOLIO OF SOLUTIONS, NETWORKING AND SERVICE OFFERINGS THAT IS TRANSFORMING THE TRADITIONAL CREATIVE AND BUSINESS PROCESSES OF MEDIA AND ENTERTAINMENT COMPANIES AND POSITIONING THEM TO LEVERAGE THEIR INTELLECTUAL ASSETS INTO NEW COMMERCIAL OPPORTUNITES.
ADDITIONAL INFORM
MEDIA AND ENTERT
AT WWW
.IBM.COM/SOLUTION
FOR THE
FOUND
221
ANTIRUST
ANTITRUST
DISTRUST
MISTRUST
PIECRUST
HOLOCAUST
MISADJUST
PREADJUST
READJUST
STARDUST
WANDERLUST
ANTIRUST
223
224
225
CORRECT IT
DONE
222
FILMTRUST
220

FIG. 14

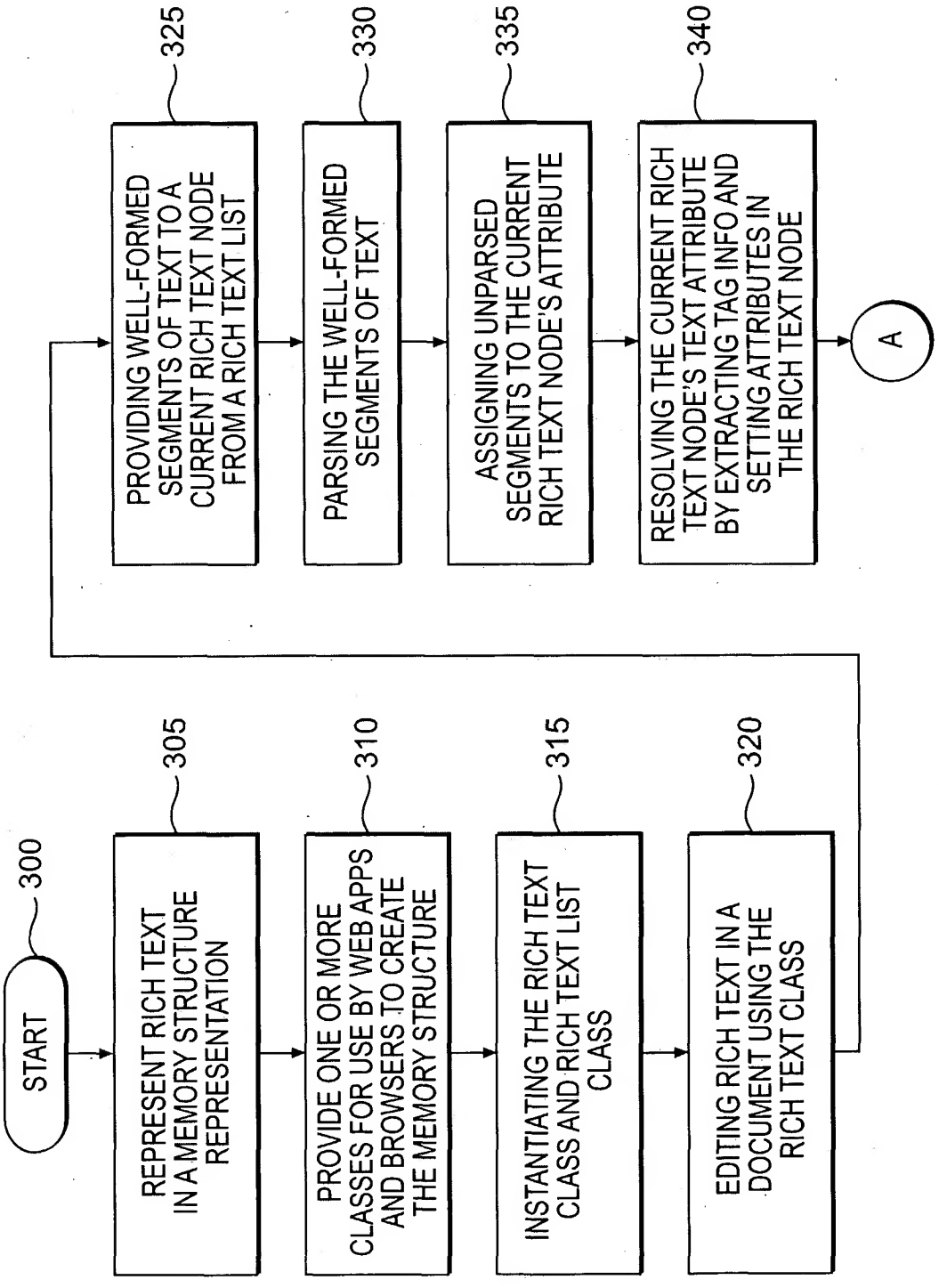

START
300
REPRESENT RICH TEXT IN A MEMORY STRUCTURE REPRESENTATION
305
PROVIDE ONE OR MORE CLASSES FOR USE BY WEB APPS AND BROWSERS TO CREATE THE MEMORY STRUCTURE
310
INSTANTIATING THE RICH TEXT CLASS AND RICH TEXT LIST CLASS
315
EDITING RICH TEXT IN A DOCUMENT USING THE RICH TEXT CLASS
320
PROVIDING WELL-FORMED SEGMENTS OF TEXT TO A CURRENT RICH TEXT NODE FROM A RICH TEXT LIST
325
PARSING THE WELL-FORMED SEGMENTS OF TEXT
330
ASSIGNING UNPARSED SEGMENTS TO THE CURRENT RICH TEXT NODE'S ATTRIBUTE
335
RESOLVING THE CURRENT RICH TEXT NODE'S TEXT ATTRIBUTE BY EXTRACTING TAG INFO AND SETTING ATTRIBUTES IN THE RICH TEXT NODE
340
A

FIG. 15A

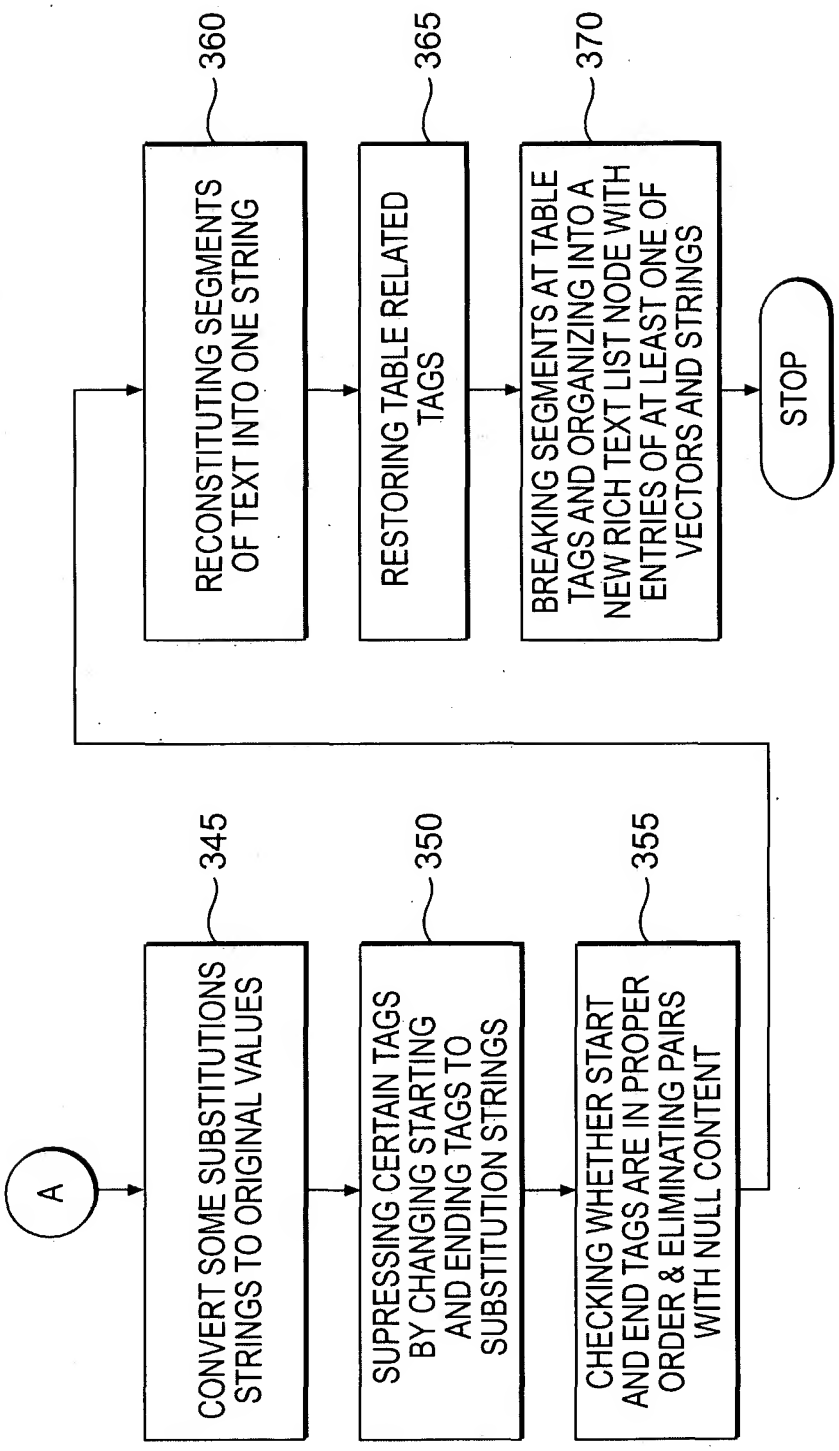

A
CONVERT SOME SUBSTITUTIONS STRINGS TO ORIGINAL VALUES
345
SUPRESSING CERTAIN TAGS BY CHANGING STARTING AND ENDING TAGS TO SUBSTITUTION STRINGS
350
CHECKING WHETHER START AND END TAGS ARE IN PROPER ORDER & ELIMINATING PAIRS WITH NULL CONTENT
355
RECONSTITUTING SEGMENTS OF TEXT INTO ONE STRING
360
RESTORING TABLE RELATED TAGS
365
BREAKING SEGMENTS AT TABLE TAGS AND ORGANIZING INTO A NEW RICH TEXT LIST NODE WITH ENTRIES OF AT LEAST ONE OF VECTORS AND STRINGS
370
STOP

FIG. 15B

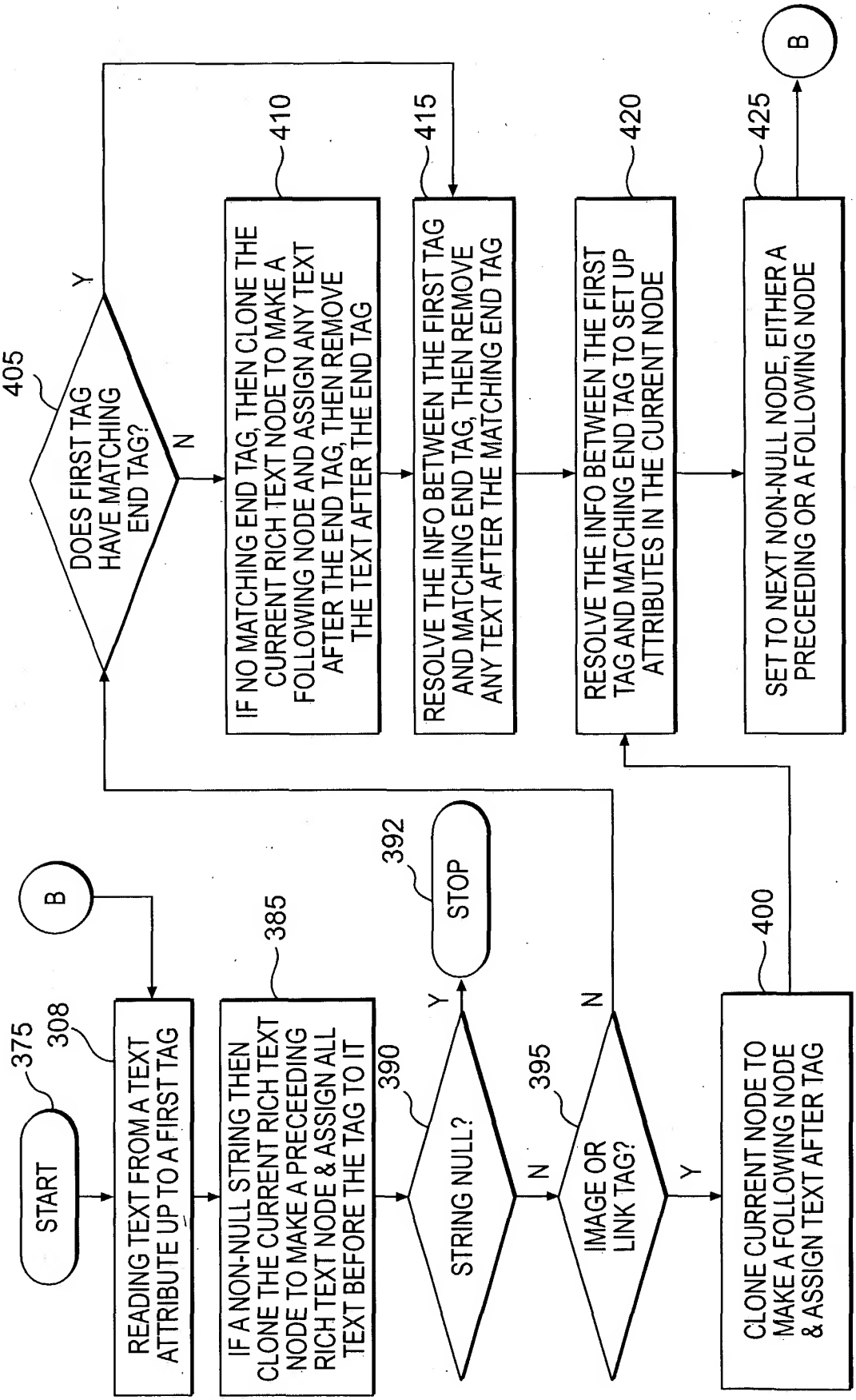

START
375
READING TEXT FROM A TEXT ATTRIBUTE UP TO A FIRST TAG
308
B
IF A NON-NULL STRING THEN CLONE THE CURRENT RICH TEXT NODE TO MAKE A PRECEEDING RICH TEXT NODE & ASSIGN ALL TEXT BEFORE THE TAG TO IT
385
STRING NULL?
390
Y
STOP
392
N
IMAGE OR LINK TAG?
395
N
Y
CLONE CURRENT NODE TO MAKE A FOLLOWING NODE & ASSIGN TEXT AFTER TAG
400
DOES FIRST TAG HAVE MATCHING END TAG?
405
Y
N
IF NO MATCHING END TAG, THEN CLONE THE CURRENT RICH TEXT NODE TO MAKE A FOLLOWING NODE AND ASSIGN ANY TEXT AFTER THE END TAG, THEN REMOVE THE TEXT AFTER THE END TAG
410
RESOLVE THE INFO BETWEEN THE FIRST TAG AND MATCHING END TAG, THEN REMOVE ANY TEXT AFTER THE MATCHING END TAG
415
RESOLVE THE INFO BETWEEN THE FIRST TAG AND MATCHING END TAG TO SET UP ATTRIBUTES IN THE CURRENT NODE
420
SET TO NEXT NON-NULL NODE, EITHER A PRECEEDING OR A FOLLOWING NODE
425
B

FIG. 16

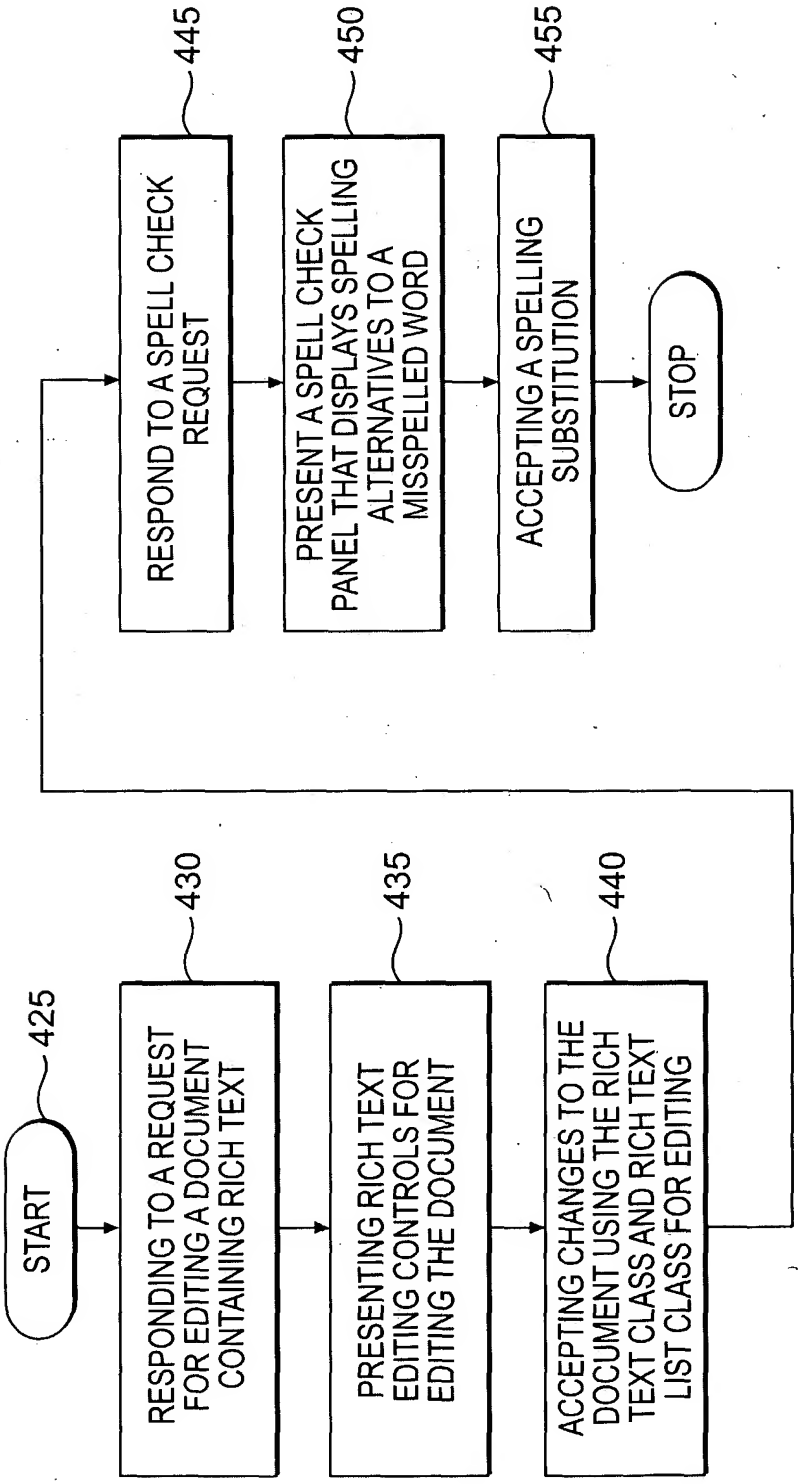

START
425
RESPONDING TO A REQUEST FOR EDITING A DOCUMENT CONTAINING RICH TEXT
430
PRESENTING RICH TEXT EDITING CONTROLS FOR EDITING THE DOCUMENT
435
ACCEPTING CHANGES TO THE DOCUMENT USING THE RICH TEXT CLASS AND RICH TEXT LIST CLASS FOR EDITING
440
RESPOND TO A SPELL CHECK REQUEST
445
PRESENT A SPELL CHECK PANEL THAT DISPLAYS SPELLING ALTERNATIVES TO A MISSPELLED WORD
450
ACCEPTING A SPELLING SUBSTITUTION
455
STOP

FIG. 17

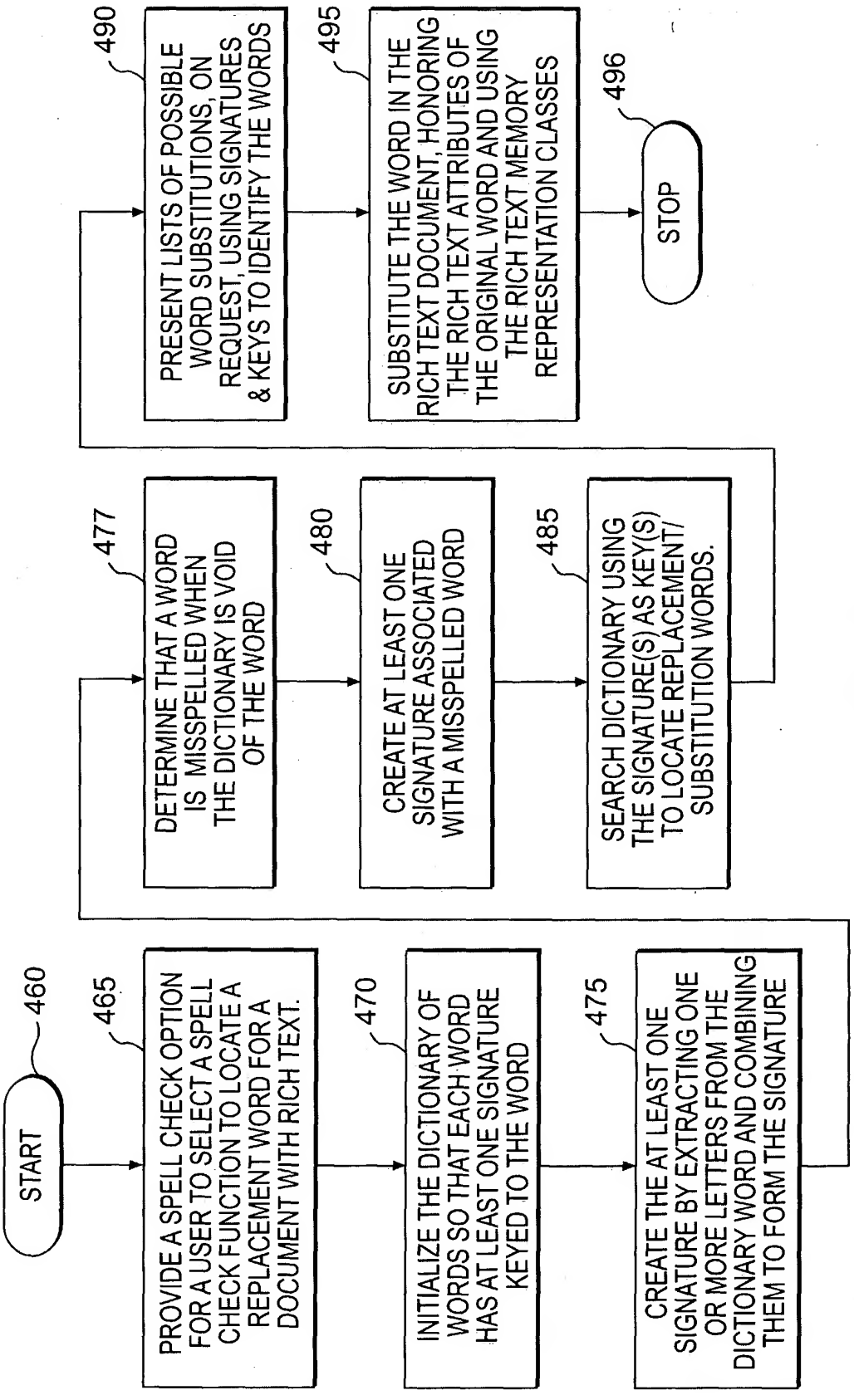

START
460
PROVIDE A SPELL CHECK OPTION FOR A USER TO SELECT A SPELL CHECK FUNCTION TO LOCATE A REPLACEMENT WORD FOR A DOCUMENT WITH RICH TEXT.
465
INITIALIZE THE DICTIONARY OF WORDS SO THAT EACH WORD HAS AT LEAST ONE SIGNATURE KEYED TO THE WORD
470
CREATE THE AT LEAST ONE SIGNATURE BY EXTRACTING ONE OR MORE LETTERS FROM THE DICTIONARY WORD AND COMBINING THEM TO FORM THE SIGNATURE
475
DETERMINE THAT A WORD IS MISSPELLED WHEN THE DICTIONARY IS VOID OF THE WORD
477
CREATE AT LEAST ONE SIGNATURE ASSOCIATED WITH A MISSPELLED WORD
480
SEARCH DICTIONARY USING THE SIGNATURE(S) AS KEY(S) TO LOCATE REPLACEMENT/ SUBSTITUTION WORDS.
485
PRESENT LISTS OF POSSIBLE WORD SUBSTITUTIONS, ON REQUEST, USING SIGNATURES & KEYS TO IDENTIFY THE WORDS
490
SUBSTITUTE THE WORD IN THE RICH TEXT DOCUMENT, HONORING THE RICH TEXT ATTRIBUTES OF THE ORIGINAL WORD AND USING THE RICH TEXT MEMORY REPRESENTATION CLASSES
495
STOP
496

FIG. 18